Attachment A

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)
	)
SBC Petition for Expedited Ruling	)
that it is Non-Dominant in Its Provision of	)
Advanced Services and for Forbearance	)
from Dominant Carrier Regulation of	)
Those Services	)

SBC PETITION FOR EXPEDITED RULING THAT IT IS NON-DOMINANT IN ITS PROVISION OF ADVANCED SERVICES AND FOR FORBEARANCE FROM DOMINANT CARRIER REGULATION OF THOSE SERVICES

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SBC Communications Inc., on behalf of itself and its subsidiaries (collectively referred to as "SBC"), respectfully asks the Commission to find it non-dominant in its provision of advanced services, as defined in the *SBC/Ameritech Merger Order*,[1] and to forbear from dominant carrier regulation of those services. The Commission concluded in the *SBC/Ameritech Merger Order* that SBC is presumptively non-dominant when it provides advanced services through separated affiliates. Recently, however, the District of Columbia Circuit concluded that SBC's advanced services affiliates are successors or assigns of the SBC operating companies for

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[1] *Applications of Ameritech Corp., Transferor, and SBC Communications, Inc. Transferee, for Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 90, 95, and 101 of the Commission's Rules,* 14 FCC Rcd 14712 (1999), *(SBC/Ameritech Merger Order),* App. C, Conditions at 2. SBC hereinafter uses the term "advanced services" or "broadband services" to refer to those services that meet the definition of "advanced services" in the *SBC/Ameritech Merger Order*. SBC sometimes herein also refers to advanced services used in conjunction with Internet access as "broadband Internet access services."

purposes of section 251(c) of the Communications Act.[2] SBC does not believe that this decision affects the presumption of non-dominance accorded its advanced services affiliates in the *SBC/Ameritech Merger Order*. Some have suggested that, following the *ASCENT* decision, SBC's affiliates should be treated as dominant in their provision of advanced services. SBC disagrees that the *ASCENT* decision has that effect. To remove any uncertainty with respect to the matter, SBC shows herein, and asks the Commission to reaffirm, that it remains non-dominant in the provision of advanced services. In fact, SBC shows, and asks the Commission to conclude, that it is non-dominant in its provision of these services irrespective of whether it continues to provide them through a separated affiliate. Consistent with that finding, the Commission should forbear from applying dominant carrier regulation, including tariff requirements, to SBC's provision of advanced services.

SBC requests further that the Commission issue these rulings on an expedited basis. The Commission is under a statutory mandate to remove barriers to infrastructure investment and to encourage the deployment of advanced capabilities by using, among other things, its forbearance authority.[3] Particularly with the economy faltering, and the high-tech industry on the skids, the Commission should take immediate measures to implement this mandate. The telecommunications industry is a key engine of the U.S. economy, and a regulatory framework that encourages investment by all telecommunications carriers will have ripple effects throughout the economy that benefit all Americans. That is why, just last week, Intel asked the Commission to deregulate all last-mile broadband facilities.

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2 *Association of Communications Enterprises v. FCC,* 235 F.3d 662 (D.C. Cir. 2001).

3 47 U.S.C. § 157 (1991 & Supp. I 2001).

This forbearance petition is by no means the answer in and of itself. Even as a non-dominant provider of advanced services, SBC would still be subject to a blanket of regulations that do not apply to its larger competitors. Worse yet, the Commission is considering other proposals that would dramatically increase the cost of and revenues from broadband deployment by incumbent LECs. Unless and until the Commission, in the words of Chairman Powell, moves to "some degree of less regulation" in the broadband market that would be "*not so technology centric,*"[4] SBC and other incumbent LECs will lack incentives to invest aggressively in broadband infrastructure or new broadband services. Thus, how the Commission decides this issue, and how quickly, will dramatically influence broadband investment and deployment decisions by SBC and other incumbent LECs.

Still, this petition offers the Commission the opportunity to take a step in the right direction, to start on the path of a more rational broadband policy that encourages investment by *all* participants in the market. The evidence that SBC is non-dominant in the competitive advanced services market is overwhelming - far more so than the evidence on which the Commission relied in declaring AT&T non-dominant. In the face of this evidence and a sinking economy that badly needs a lift from the technology sector and increased investment in the new broadband infrastructure by incumbent LECs, the Commission should prioritize SBC's petition and expeditiously re-affirm SBC's non-dominant status and forbear from applying dominant carrier regulation to it.

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[4] "*Cable Bureau Suggests Regulatory Forbearance for New Services,*" COMMUNICATIONS DAILY, Feb. 23, 2001 (emphasis added).

I. INTRODUCTION AND SUMMARY

Over the past several years, the Commission has recognized repeatedly that it should take a hands-off approach to the advanced services market. Chairman Powell, in particular, has recognized that "restraint should be the watchword for governments in any new economy driven by unrelenting currents of technological change and innovation such as communications and advanced services."[5] Former Chairman Kennard, as well, stressed the need for "a hands-off deregulatory approach to the broadband market."[6]

The Commission has been true to its word with respect to some providers of advanced services. Cable operators, for example, are completely deregulated in their provision of advanced services. They may price their services as they choose, without filing tariffs, and they are under no obligation to make their services or facilities available to would-be competitors at regulatorily prescribed discounts or rates. They are immune even from "open access" obligations. This regulatory freedom has been accorded cable operators despite the fact that they were the first to provide advanced services for mass-market use and still account for about 2/3 of that market.

Also deregulated are most providers of advanced services to medium and large business customers, including the three largest providers of such services - AT&T, WorldCom, and

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[5] Michael K. Powell, Commissioner, FCC, Remarks before the Federal Communications Bar Association (Chicago Chapter), Chicago IL, June 15, 1999.

[6] Chairman William E. Kennard, Remarks Before the Federal Communications Bar Northern California Chapter, *The Unregulation of the Internet: Laying a Competitive Course for the Future* (July 20, 1999). *See also* Report, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, (First Advanced Services Report)* 14 FCC Rcd 2398 (1999). *See also Implementation of the Local Competition Provisions of the Telecommunications Act of 1996,* 15 FCC Rcd 3696 (1999) (*UNE Remand Order*) ¶ 316; *First Advanced Services Report* ¶ 5 (in advanced services, "[w]e intend to rely as much as possible on free markets and private enterprise.")

Sprint. These three companies, which collectively maintain a 70% market share for such services and which enjoy significant advantages over Bell operating companies (BOCs) in that market by virtue of their ability to provide end-to-end services, are all classified as non-dominant.

The Commission has not taken the same hands-off approach, however, to advanced services provided by incumbent LECs. Incumbent LECs must unbundle the high frequency portion of the loop and make it available to advanced services competitors at regulated rates. They must permit competitors to collocate equipment so that it is easier for such competitors to access that spectrum. They must offer wholesale discounts to their competitors on their retail advanced service offerings. They must contribute to the universal service fund when they provide broadband access. They are banned from the provision of interLATA services, including Internet backbone services, absent section 271 authority. They have been required to establish separate affiliates for their advanced services operations as conditions for merger approvals. And, of particular relevance to this petition, they are treated by the Commission as dominant carriers in the provision of advanced services both to mass market and larger business customers.

This regulatory disparity is indefensible. The Commission has long recognized that the 1996 Act is "technologically neutral and is designed to ensure competition in all telecommunications markets."[7] It also has repeatedly insisted that consumers, not regulators,

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[7] Order on Remand, *Deployment of Wireline Services Offering Advanced Telecommunications Capability,* 15 FCC Rcd 385 (1999), ¶ 2 (*Advanced Services Order on Remand)*; *Deployment of Wireline Services Offering Advanced Telecommunications Capability, (Advanced Services Memorandum Opinion and Order),* 13 FCC Rcd 24011 (1998) ¶ 11. *See also* Report to Congress, *Federal-State Joint Board on Universal Service*, 13 FCC Rcd 11501 (1998), ¶ 98 ("We are mindful that, in order to promote equity and efficiency, we should avoid creating regulatory distinctions based purely on technology"); B. Esbin, *Internet Over Cable: Defining the Future in Terms of the Past*, Office of Plans and Policy Working Paper

should choose winners and losers in the marketplace.[8] But the regulatory shackles under which incumbent LECs, but no other providers of advanced services, operate are anything but technologically neutral, and they have a profound impact on who succeeds and who fails in the marketplace. As the Department of Justice has aptly stated:

> [a]pplying different degrees of regulation to firms in the same market necessarily introduces distortions into the market; competition will be harmed if some firms face unwarranted regulatory burdens not imposed on their rivals.[9]

Even SBC's broadband competitors have recognized that "unequal regulation harms consumers and competition."[10]

To be sure, the Commission has often regulated firms with market power more heavily than their competitors. But the Commission has repeatedly acknowledged that "the incumbent

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No. 30, Aug. 1998 at 96 (noting the fundamental communications policy goal of "competitive and technological neutrality").

[8] *See Advanced Services Memorandum Opinion and Order*, ¶ 2 ("The role of the Commission is not to pick winners or losers, or select the 'best' technology to meet consumer demand, but rather to ensure that the marketplace is conducive to investment, innovation, and meeting the needs of consumers"); *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996,* 11 FCC Rcd 15499 (1996) (*Local Competition Order),* ¶ 993 ("[A]s a general policy matter, … all telecommunications carriers that compete with each other should be treated alike regardless of the technology used unless there is a compelling reason to do otherwise.") See *also Implementation of Section 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services,* (9 FCC Rcd 1411 (1994), ¶ 19 ("Success in the marketplace should be driven by technological innovation, service quality, competition-based pricing decisions, and responsiveness to consumer needs – and not by strategies in the regulatory arena. [Thus] even-handed regulation, in promoting competition, should help lower prices, generate jobs, and produce economic growth.")

[9] Reply Comments of the Department of Justice, *Competition in the Interstate Interexchange Marketplace,* CC Docket No. 90-132, filed Sept. 29, 1990, at 26, n. 42.

[10] AT&T *ex parte* presentation in support of its Motion for Reclassification as a Nondominant Carrier, CC Docket No. 79-252, April 20, 1995, at 38.

LEC does not retain a monopoly position in the advanced services market,"[11] and its reports document that fact.[12] Indeed, they show that SBC is dwarfed by its competitors in the provision of advanced services. Far from limiting the exercise of market power, the Commission's ILEC-centric regulations only add to the clout of the largest providers in the market.

SBC has urged the Commission to address this anomaly in holistic fashion. It has asked the Commission to establish a new, overarching regulatory paradigm for all providers of advanced services – one that is appropriate to nascent markets in which the "preconditions for monopoly appear absent,"[13] and one that is consistent with the deregulatory principles embodied

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[11] *UNE Remand Order*, ¶ 308. *See also Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to reallocate the 29.5-30.0 GHz Frequency, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services; Hyperion Communications Long Haul, L.P., Application for Expedited Review,* 15 FCC Rcd 11857 (2000) (*Fixed Wireless Competition Order),*¶ 19 ("The record before us, which shows a continuing increase in consumer broadband choices within and among the various delivery technologies – xDSL, cable modems, satellite, fixed wireless, and mobile wireless, suggests that no group of forms or technology will likely be able to dominate the provision of broadband services."); *First Advanced Services Report,* ¶ 48 (the "preconditions for monopoly appear absent" in the consumer broadband market). *And see Open Network Architecture Tariffs of Bell Operating Companies*, Order, 9 FCC Rcd 440 (1993) (holding that Southwestern Bell was not required to file cost support information for any of the Basic Service Elements used to provide its packet switching services because the "packet switching services market is still highly competitive" and such policies would therefore serve "little value in promoting our procompetitive policies"); *Southwestern Bell Telephone Company; Petition for Waiver of Section 64.702 of the Commission's Rules and Regulation to Provide and Market Asynchromones Conversion on an Unseparated Basis, (Southwestern Bell Protocol Conversion Waiver Review Order)*, 5 FCC Rcd 161, ¶ 19 (1990) (finding that detailed cost support rules of 61.38 should not apply to Southwestern Bell's MicroLink II a packet switching service, because "Southwestern entered the [packet switching] market with a zero share of the business and strong established competitors.")

[12] For the most recent report s*ee Trends in Telephone Service,* Industry Analysis Division, Common Carrier Bureau, August 2001 at Table 2.1 (as of December 2000, there wee 3.6 million cable modem lines in service versus 2 million ADSL lines).

[13] *First Advanced Services Report,* ¶ 48. This statement was made by the Commission with particular reference to the consumer broadband market. In that same report, however, the Commission noted, with approval, BellSouth's statement that "[h]igh-end business users, especially in densely populated areas, already have access to a wide array of broadband networking and access capabilities." *Id.* ¶ 26. And, as noted, the Commission has elsewhere observed that there is significant competition in the provision of advanced services to larger businesses.

in the 1996 Act and section 706 in particular.[14] SBC continues to believe that a comprehensive approach to the advanced services market is the best way to achieve a coherent and rational framework for that market. In the meantime, however, it is imperative that the Commission at least provide equal treatment with respect to its tariff requirements.

As demonstrated below, and in the Declaration of Robert W. Crandall and J. Gregory Sidak, SBC is non-dominant in both of the relevant markets for the provision of advanced services: the mass market and the larger business market. In fact, it is non-dominant in these markets irrespective of whether it provides advanced services through a separate subsidiary.

In the provision of advanced services for mass-market use, SBC's market share is about 30-35%, and no longer growing. Moreover, the own-price elasticity of demand (the percent change in demand for every one percent increase in price) is somewhere between –1.2 and –1.45, a level that is incompatible with the exercise of market power by SBC. This high level of demand elasticity is confirmed by the very type of evidence, including, but not limited to, churn rates, on which the Commission has previously relied in finding other carriers non-dominant in their respective markets. Supply elasticities, as well, are high. In fact, there is so much unused cable modem capacity that SBC's cable modem competitors alone could absorb immediately many, if not all, of the consumers who currently use DSL transport service provided by SBC. And far from enjoying advantages that effectively preclude the effective functioning of the market, SBC faces significant cost and other disadvantages vis-à-vis its cable modem competitors.

In the larger business market, the story is no less compelling. The Commission recognized eight years ago that the market for packet-switched business services is "highly

[14] *See, e.g.,* Comments of SBC Communications Inc. and BellSouth Corp, GN Docket No. 00-185, December 1, 2000.

competitive," and it substantially deregulated the provision of such services by incumbent LECs, removing them from price cap regulation and eliminating cost support requirements.[15] The market today remains equally dominated by the largest interexchange carriers. Thus, whereas AT&T, WorldCom, and Sprint collectively account for two thirds of the market within SBC's region, SBC accounts for only about 12%. Moreover, its market share is static.

This in itself is dispositive. Given its paltry market share, SBC could not possibly dictate price in the larger business market for advanced service by restricting output. Other evidence, though, further confirms SBC's lack of market power in this market. With respect to demand elasticity, the Commission has already twice found that larger business customers are highly demand elastic, and that conclusion is equally applicable here. Moreover, given SBC's low market share, there can be little doubt that its competitors could absorb immediately a large portion of SBC's business without significant expense. On top of all this, SBC faces significant disadvantages in this market, the most notable of which is that it cannot provide the end-to-end service that many customers demand.

While it is evident that SBC thus has no market power in the provision of advanced services to mass market or larger business customers, it is equally evident that SBC could not quickly acquire market power through cross-subsidization, discrimination, or the effectuation of a price squeeze (even if it were inclined to, which it is not). The Commission has previously rejected arguments that a BOC could gain market power through cross-subsidization, noting that such would be possible only if the cross-subsidization permitted the BOC to set prices at predatory levels, drive out its competitors, and then sustain prices significantly above

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[15] *See* note 11 *supra.*

competitive levels.[16] The Commission found five years ago that the BOCs could not effect such a strategy,[17] and it is even more inconceivable today, particularly given that the ostensible source of such cross-subsidization – the BOCs' access rates – have sharply declined as a result of price cap regulation and, more recently, the *CALLS Order*.[18] Moreover, in the mass market context, SBC's Internet service provider generally price its broadband internet service product at a *higher* price than cable modem service due to the higher costs of deploying DSL service, and SBC does not control the rates charged consumers by unaffiliated Internet service providers. Under the circumstances, there is no credible risk of predatory pricing.

Nor could SBC quickly acquire market power through discrimination or a price squeeze. In the mass-market context, SBC's largest competitors — cable television franchise holders — do not even rely on SBC's facilities. Thus neither discrimination nor a price squeeze is even theoretically possible. As for the larger business context, SBC has been competing in that market since the early-to-mid 1990s, but its market share within its region has remained static at approximately 12 percent; that in itself is proof that SBC could not possibly quickly gain market power in this market through illegal conduct.

In this Petition, we begin our analysis by describing the FCC's analytical framework for assessing dominance and non-dominance. We then show that the advanced services market, as defined in the *SBC/Ameritech Merger Order*, is a relevant product market that encompasses two

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[16] *Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area and Policy and Rules Concerning the Interstate, Interexchange Marketplace,* 12 FCC Rcd 15756 (1997) (*BOC Classification Order*), ¶ 103.

[17] *Id.,* ¶ 104-108.

[18] *Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Low-Volume Distance Users; and Federal-State Joint Board on Universal Service*, 15 FCC Rcd 12962 (2000)

discrete sub-markets: the provision of advanced services for use by mass market (residential and small business) customers; and the provision of advanced services to medium and large business customers (hereinafter the "larger business market"). We show, further, that for purposes of this analysis, the Commission should treat SBC's in-region territory as the relevant geographic market for both of these product markets. We then show that SBC is non-dominant in each of these markets.

II. THE FCC'S FRAMEWORK FOR ASSESSING NON-DOMINANCE.

A. Definition of Dominance and Non-Dominance.

The Commission defines a dominant carrier as "a carrier that possesses market power" and a non-dominant carrier as "a carrier not found to be dominant (that is, one that does not possess market power.)"[19] The Commission has held that, for purposes of this analysis, market power is the "ability to raise and maintain price above the competitive level without driving away so many customers as to make the increase unprofitable."[20]

In so holding, the Commission specifically rejected the notion that a BOC affiliate should be treated as dominant in the provision of a service if there was a risk that it could obtain advantages over its competitors by virtue of its affiliation with the BOC. Agreeing with the Department of Justice, the Commission held that dominant carrier regulation was designed to prevent the affiliate from raising its prices by restricting its output, and that dominant carrier

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(CALLS Order), aff'd in part and rev'd and remanded in part, *Texas Office of Public Utility Counsel v. FCC*, No. 00-60434 (5th Cir. 2001).

[19] 47 CFR §§ 61.3(q), 61(y).

[20] Fourth Report and Order, *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor,* 95 FCC 2d 554 (1983), ¶ 7; *BOC Classification Order,* ¶ 85.

regulation was "'at best a clumsy tool for controlling vertical leveraging'" by the BOC itself.[21] Moreover, the Commission noted, "regulations associated with dominant carrier classification can … have undesirable effects on competition."[22] Accordingly, the Commission does not treat a carrier as dominant in the provision of a service unless the carrier can raise the market price of that service by restricting its output of it. It does not, as Crandall and Sidak point out, "impose dominant carrier status simply to ensure what some refer to as a 'level playing field.'"[23] If it has concerns about leveraging of market power in particular services, it addresses those concerns directly through its regulation of those services.

B. Definition of Relevant Markets.

In order to assess market power, it is first necessary to define the relevant product and geographic markets.[24] Since the *BOC Classification Order,* in 1996, the Commission has followed the *Merger Guidelines*[25] in defining product and geographic markets.[26] Under those guidelines, product markets are defined primarily with reference to demand cross-elasticities. Specifically, two services are deemed to be in the same product market if a small but non-transitory price increase by a monopoly provider of one of these services would cause enough

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21 *Id.,* ¶¶ 85, 91.

22 *Id.,* ¶ 90.

23 *See* Declaration of Robert W. Crandall and J. Gregory Sidak, Attachment 1 *(Crandall/Sidak Declaration)* ¶ 84.

24 *See BOC Classification Order,* ¶ 16.

25 United States Dept. of Justice Antitrust Div., and Federal Trade Commission, *1992 Horizontal Merger Guidelines,* 57 Fed. Reg. 41552 (1992) *(Merger Guidelines)*.

26 *See BOC Classification Order,* ¶ 26 (adopting guidelines). *See also e.g., Application of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc.,* 13 FCC Rcd 18025 (1998) (*WorldCom/MCI Merger Order*), ¶¶ 24-31 (applying guidelines).

buyers to shift their purchases to the second service as to render the increase unprofitable.[27] Two geographic areas are in the same geographic market if a small, but non-transitory price increase for a service in one area would cause customers to switch to the same service offered at a lower price in the other area.[28]

Although the Commission defines product markets primarily with reference to demand elasticity, the Commission has held, consistent with the *Merger Guidelines,* that if "production substitution among a group of products is nearly universal among the firms selling one or more of those products," it may consider that group of products to be in the same product market. In other words, if the facilities of most competitors are capable of providing a group of services, those services may be considered, for purposes of administrative convenience, to be in the same product market.[29]

The Commission has recognized that it may not be practicable to identify and analyze every single product and geographic market in a particular regulatory proceeding.[30] Accordingly, for purposes of assessing market power it will conduct a separate analysis for two different services or two different geographic areas only if there is credible evidence that there is or could be a lack of competitive performance with respect to one of those services or areas.[31]

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[27] *See also BOC Classification Order*, ¶ 28; *Crandall/Sidak Declaration,* ¶ 32. *Merger Guidelines,* § 1.0.

[28] *BOC Classification Order,* ¶ 28.

[29] *Application of WorldCom, Inc. and MCI Communications Corp. for Transfer of Control of MCI Communications Corporation to WorldCom, Inc.,* 13 FCC Rcd 18025 (1998) (*WorldCom/MCI Merger Order),* ¶ 27.

[30] *BOC Classification Order,* ¶¶ 31, 56.

[31] *Id.*, ¶¶ 42-43.

C. Framework for Assessing Market Power.

The Commission has generally looked at four factors in determining whether a carrier has market power in the provision of a service: (1) market share and changes therein; (2) demand elasticity; (3) supply elasticity; and (4) disparities in size, resources, financial strength, and cost structures among the market participants.[32] With respect to the fourth factor, the Commission has repeatedly held that the focus of its inquiry is not on whether the firm at issue has certain advantages in the relevant market but "whether any such advantages are so great to preclude the effective functioning of a competitive market."[33]

In the *BOC Classification Order,* the Commission added to this test. The Commission readily concluded that the BOC long-distance affiliates would not have market power when they first entered the long-distance market. Theorizing, though, that this initial lack of market power might merely reflect the fact that the BOCs had previously been excluded from the market, the Commission went on to address whether, "upon entry or shortly thereafter,"[34] the BOC affiliates could acquire market power by leveraging any market power of the operating company.

This additional inquiry is superfluous with respect to SBC's advanced services. SBC is not a new entrant in the advanced services market; it has been providing DSL service for use by mass market customers for at least two years, and it has been providing advanced services to larger business customers for far longer. Thus the Commission need not speculate on whether

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[32] *Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier,* 11 FCC Rcd 3271 (1995) (*AT&T Reclassification Order*); *Competition in the Interstate Interexchange Marketplace,* 6 FCC Rcd 5880 (1991), (*AT&T Streamlining Order*). *See also COMSAT Corp. Petition Pursuant to Section 10(c) of the Communications Act of 1934, as amended, for Forbearance From Dominant Carrier Regulation and for Reclassification as a Non-Dominant Carrier,* 13 FCC Rcd 14083 (1998).

[33] *AT&T Reclassification Order*, ¶ 73; *AT&T Streamlining Order*, n. 187.

[34] *BOC Classification Order,* ¶ 96.

SBC could "upon entry or soon thereafter" acquire market power in these services; in two-plus years, it has not done so. In fact, as shown below, it has not even come close. Nevertheless, out of an abundance of caution, SBC shows below, not only that it currently lacks market power in its provision of advanced services, but also that it could not quickly acquire market power.

III. MARKET DEFINITION.

As noted, the *Merger Guidelines* define markets primarily based on demand cross-elasticities. Because quantitative evidence of demand cross-elasticities between two services is often unavailable, however, courts and the Commission have generally relied on qualitative evidence designed to elicit whether two services are "reasonably interchangeable" in their use.[35]

Based on such analysis and Commission precedent, we show below that advanced services are not reasonably interchangeable with other services. We then show that there are two relevant submarkets within the market for advanced services: the provision of advanced services for use by mass market customers (the "mass market") and the provision of advanced services to medium and large business customers (the "larger business" market). We show further that there are no additional relevant submarkets within these markets. Consistent with the *BOC Classification Order,* we assume, for purposes of analysis, that the relevant geographic market is SBC's in-region territory.

A. Advanced Services are Not Reasonably Interchangeable with Other Services.

The Commission has consistently recognized that advanced services comprise a discrete product market. The Commission first made this determination shortly after incumbent LECs began providing high-speed packet switching services, in the early 1990s. The Commission

[35] *Crandall/Sidak Declaration,* ¶ 34 (*citing Brown Shoe Co. v. United States,* 370 U.S. 294, 325 (1962), ABA Antitrust Section, Antitrust Law Developments 200 (3d ed. 1992).

recognized at that time that, because packet switching services were provided over brand new networks, these services should be regulated differently than services provided over the legacy circuit-switched telephone network. Accordingly, the Commission held that "packet-switched service . . . should . . . be excluded" from the price-cap regulation that the Commission adopted for traditional ILEC services.[36] The Commission also concluded that incumbent LECs should not be required to file detailed cost-support information for "packet-switched services" given that "[t]he packet switching services market is . . . highly competitive."[37] It likewise justified the decision not to investigate an ILEC's packet-switching rates on the fact that the ILEC was "a new entrant in the *packet switching market*, which is currently dominated by a relatively small number of well-established service providers."[38]

Until very recently, advanced services were provided exclusively to business customers. In the late 1990s, however, several new technologies were introduced that enabled advanced services to be provided to mass-market consumers for the first time. As explained below, these new advanced services were designed primarily for broadband Internet access service. Consistent with its earlier determinations, the Commission found that the provision of these new

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[36] *Policy and Rules Concerning Rates for Dominant Carriers*, Second Report and Order, 5 FCC Rcd 6786, ¶ 195 (1990).

[37] *Open Network Architecture Tariffs of Bell Operating Companies*, Order, 9 FCC Rcd 440 (1993), ¶ 68 (emphasis added). *See also Southwestern Bell Protocol Conversion Waiver Review Order*, ¶ 19 (1990) (finding that detailed cost support rules of 61.38 should not apply to Southwestern Bell's MicroLink II a packet switching service, because "Southwestern entered the [packet switching] market with a zero share of the business and strong established competitors.")

[38] *Bell South Corporation on Behalf of Southern Bell Telephone and Telegraph Company, Petition for Waiver of Section 64.702 of the Commission's Rules and Regulations To Authorize Protocol Conversion Offerings*, 3 FCC Rcd 6961, ¶ 9 (1988) (emphasis added).

advanced services should also be treated as a distinct relevant product market.[39] The Commission based this determination on the fact that these new services "include features unavailable" over conventional narrowband networks, "such as access to high-bandwidth content" and "always on" connections; that there are "high consumer costs involved in switching to high-speed platforms" compared to traditional services; and that "[p]reliminary quantitative studies indicate that narrowband and high-speed access services occupy separate markets."[40]

The Commission's consistent holding that advanced services are not reasonably interchangeable with other services is obviously correct. Consumers use advanced services for very different purposes than other services, particularly those provided over the circuit-switched telephone network. Consumers use advanced services primarily for high-speed data transmission.[41] Although it has recently become possible to provide virtually real time voice communications over packet switching networks, customers still overwhelmingly use these networks for transmitting stored data.[42] In contrast, the vast majority of revenue generated on circuit switched networks still comes from the provision of voice services.[43]

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[39] *See Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and American Online, Inc., Transferors, to AOL Time Warner Inc., Transferee*, 16 FCC Rcd. 6547, ¶ 69 (2001).

[40] *Id.,* ¶¶ 69-71.

[41] *See Crandall/Sidak Declaration*, ¶ 35 and notes 42 and 97.

[42] *Id.,* ¶ 98.

[43] *See*, *e.g.*, P. Johnson, Robertson Stephens, Investext Rpt. No. 8080509, Sonus Networks Inc. - Company Report at *6 (July 12, 2001) ("Carrier revenues from voice services currently dwarf revenues from data services by as much as 5 to 1. Virtually every carrier in the world hopes to capture a portion of this revenue stream."); M. Brown, Dain Rauscher Wessels, Investext Rpt. No. 2311326, Sonus Networks Inc. - Company Report at 5 (Oct. 3, 2000) ("Carriers have invested huge amounts of capital on their circuit-switched networks over the years. In 1999 alone, the estimated investment on circuit-switched equipment was roughly $45 billion. The investment in circuit-switched equipment has allowed carriers to capitalize on the massive revenue opportunity for voice services, which recently represented approximately 90% of sales.").

The significant disparity in the way customers use advanced services and circuit switching services reflects the fact that these services are provided using different network architectures with very different underlying technologies.[44] As the Commission has recognized, packet switching networks are much more efficient than circuit switching networks for carrying data traffic: "In contrast to circuit-switched networks, packet-switched networks do not require that a dedicated end-to-end transmission path (or circuit) be opened for each transmission. Rather, each router calculates the best routing for a packet at a particular moment, given current traffic patterns, and sends the packet to the next router through a process known as 'dynamic routing.'"[45] Moreover, packet switching networks have other desirable features for data transmission – including highly developed error correction capabilities and rapid connect times – that typically are unavailable with circuit switching networks.[46]

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[44] *See*, *e.g.*, *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, Notice of Inquiry, 15 FCC Rcd 16641, App. A ¶ 8 & fn.29 (2000) ("a circuit switch is now the typical switching mechanism in a telecommunications network designed to carry voice traffic," whereas "a packet switch [] is the typical switching mechanism in telecommunications networks designed to carry data traffic.").

[45] B. Esbin, Cable Services Bureau, FCC, *Internet Over Cable: Defining The Future In Terms Of The Past*; OPP Working Paper No. 30 (Aug. 1998); s*ee also Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order in CC Docket No. 98-147, Fourth Report and Order in CC Docket No. 96-98, 14 FCC Rcd 20912, ¶¶ 7-8 ("The circuit-switched public telecommunications network (PSTN), which interconnects virtually every home and business, was designed to provide superior voice telephony. . . . Although this is an efficient technique for transmitting ordinary voice telephony, it is not efficient for transmitting digital information. . . . Combining xDSL-based technology with packet switching is more efficient than circuit-switched networks for the transmission of packetized data").

[46] *See*, *e.g.*, *Decreased Regulation of Certain Basic Telecommunications Services*, Notice of Proposed Rulemaking, 2 FCC Rcd 645, ¶ 20 (1987); E.C. Zimits et al., Chase Hambrecht & Quist Inc., Investext Rpt. No. 2151688, Ulticom Inc.: Initiating Coverage – Company Report at *5 (May 2, 2000) ("The cost and performance superiority of packet switching has led many traditional and new 'competitive carrier' service providers to build packet networks to handle data traffic. It has also led service providers to explore the interoperability or convergence of voice and data networks and the transmission of voice communications over packet networks."); M. Shah, IPO Maven, Investext Rpt. No.

B. Services Provided To Larger Businesses Are In A Separate Product Market From Those Provided To Mass Market Customers.

The Commission has held that interLATA services provided to mass-market customers are distinct from those provided to large business customers given that "larger business users often demand advanced long distance features (advanced features), such as frame relay, virtual private networks (VPN), and enhanced 800 services (E800 services), that differ from the services generally demanded by mass market consumers."[47] The Commission also has determined that it is appropriate to distinguish the local exchange and exchange access services provided to mass-market customers from those provided to business customers because "mass-market customers have a different decision-making process than do larger business customers" since "residential and small businesses are served primarily through mass marketing techniques including regional advertising and telemarketing, while larger businesses tend to be served under individual contracts and marketed through direct sales contacts."[48]

The Commission's holdings with respect to interLATA and local services generally are just as obviously correct with respect to advanced services. Larger businesses demand advanced services with different features than those demanded by mass-market customers. For example,

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2905227, Net2Phone: Initiating Coverage – Company Report at *2 (July 1, 1999) (Net2Phone "offers high voice quality through its proprietary voice and data compression and packet-switching technologies, which reduce packet loss and delay, route packets efficiently and perform quality enhancing functions, such as echo cancellation."); *GPRS Technology Parameters*, PC Magazine: UK Network Edition (Oct. 1999), http://www.zdnet.co.uk/pcmag/ne/tech/1999/10/gprs/02.html ("Packet-switched services have almost zero call setup time (as opposed to 5 to 30 seconds setting up a circuit-switched call) and can be tariffed on volume of data transmitted, not on connection time. This means that keeping a connection up permanently is economical, if you want to be able to receive data at any hour of the day or night; conversely, making a quick connection just to deliver a few packets (an alert, possibly) is also feasible.")

47 *WorldCom/MCI Merger Order*, ¶ 26.

48 *Application of GTE Corp. and Bell Atlantic Corp. for Consent to Transfer Control of Domestic and International Sections 214 and 310 Authorizations and Application to Transfer Control of Submarine Cable Landing License,* 15 FCC Rcd 14032 (1999), ¶ 102 and n. 253; *SBC/Ameritech Merger Order*, ¶ 68.

they typically demand services with greater bandwidth, higher levels of reliability, higher levels of service and support, and higher levels of security. Indeed, the network architectures and technologies used to serve larger business customers and mass-market customers are entirely different. As discussed below, the main advanced services provided to larger business customers are Frame Relay, ATM, and Gigabit Ethernet, whereas the main services provided for use by mass-market customers are DSL, cable modem service, and satellite.

The increased features demanded by business customers also come at a considerably higher price, which mass-market customers generally are unwilling to pay. For example, whereas the average advanced service provided to mass-market customers costs approximately $50 per month, the average larger business customer often spends several thousand dollars per month for advanced services.[49] Moreover, larger business customers' purchase advanced services in a much different manner than mass-market customers. As described in more detail below, most larger business customers enter into long-term contracts for service, and many look for service providers though a competitive bidding process.[50] In contrast, most mass-market customers of advanced services purchase their service on a monthly basis.

C. Advanced Services Provided To Mass Market Customers Represent A Discrete Product Market Without Relevant Sub-markets.

Advanced services provided for use by mass market consumers are used almost exclusively for a single application: high-speed access to an Internet service provider's point of presence. There are at least four different platforms used to offer this service: DSL, cable modem, satellite, and fixed wireless. These platforms also can be used by consumers to obtain

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49 *See Crandall/Sidak Declaration*, ¶ 100.

50 *Id.*, ¶ 115.

high-speed access to information stored in databases outside the Internet.[51] Indeed, cable operators already have deployed such applications, although SBC has not.[52] Because these applications are based on the same platforms and use the same technology that is used for high-speed Internet access services, the "product substitution among them is 'nearly universal." These applications, therefore, should be considered to be interchangeable with broadband Internet access services used by mass-market customers.[53]

There is broad consensus that broadband services for mass-market use belong to a discrete product market. The Department of Justice,[54] the Federal Trade Commission,[55] and

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[51] As noted *infra,* they also, although rarely, are used by businesses to connect their employees to corporate local area networks (LANs).

[52] *See* Excite@Home Press Release, "Excite@Home Announces Exite ClickVideo, a Broadband Video Entertainment and News Application, With Premier Content Providers," June 26, 2000 ("Excite video content is cached on servers in Excite@Home's regional data centers and cable head-ends closest to the @Home subscriber, helping to deliver fast, on-demand downloads with minimal backbone delays. This is designed to give @Home broadband subscribers consistently high-quality video content in a large video window (320X240) at up to 15 frames per second and at data rates up to 500 kbps."). *See also* AOL Time Warner Press Release**,** "Joseph J. Collins Named Chairman and CEO of New Interactive Video Division," Aug. 16, 2001. Road Runner's web site states: "The Road Runner Online Service organizes content into "channels" labeled with favorite consumer categories such as news, entertainment and sports. Within these channels Road Runner users can instantly find all the local and national information and entertainment they are looking for without going out onto the Internet - however, the Internet is also only a click away." *See* http://www.roadrunner.com/rdrun (Residential Services: Features), visited Sept. 20, 2001.

[53] *WorldCom/MCI Merger Order,* ¶ 27, *citing Merger Guidelines,* § 1.32, n. 14.

[54] Competitive Impact Statement at 9, United States v. AT&T Corp., Civil No. 00-CV-1176 (D.D.C. filed May 25, 2000) ("A relevant product market affected by [the AT&T/MediaOne] transaction is the market for aggregation, promotion, and distribution of broadband content and services.").

[55] Complaint, AOL, Inc. v. Time Warner, Inc., Docket No. C-3989 (FTC filed Dec. 14, 2000) at ¶ 21 ("The relevant product market in which to assess the effects of the proposed merger is the provision of residential broadband internet access service.").

academicians[56] have all previously so concluded, and so too has the Commission. For example, in the *First Advanced Services Report,* the Commission stated:

> we see the potential for [the consumer broadband] market to accommodate different technologies such as DSL, cable modems, utility fiber to the home, satellite and terrestrial radio. The fact that different companies are using different technologies to bring broadband to residential consumers and that each existing broadband technology has advantages and disadvantages as a means of delivery to millions of customers opens the possibility of intermodal competition, like that between trucks, trains, and planes in transportation.[57]

Likewise, in its 2000 Report to Congress on the status of competition in the market for video programming, it stated: "[A]lthough wireless and satellite broadband technologies continue to be deployed, telephone company DSL technologies remain the most significant competitors to Internet over cable."[58] And in the *AOL/Time Warner Merger Order,* the Commission concluded that high-speed Internet access services constitute the relevant product market in determining the effects of the proposed merger on the public interest.[59] The Commission also observed that "[t]he

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[56] *See* Jerry A. Hausman, J. Gregory Sidak & Hal J. Singer, *Cable Modems and DSL: Broadband Internet Access for Residential Customers*, 91 AM. ECON. ASS'N PAPERS & PROC. 302 (2001) [hereinafter Hausman, Sidak & Singer, *Cable Modems and DSL*]; Jerry A. Hausman, J. Gregory Sidak & Hal J. Singer, *Residential Demand for Broadband Telecommunications and Consumer Access to Unaffiliated Internet Content Providers*, 18 YALE J. ON REG. 129 (2001) [hereinafter Hausman, Sidak & Singer, *Residential Demand for Broadband*].

[57] *First Advanced Services Report,* 2398, 2423-24 (1999). In that same report, the FCC noted that "whether a capability is broadband does not depend on the use of any particular technology or the nature of the provider." *Id.* at 2407.

[58] Seventh Annual Report, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 16 FCC Rcd. 6005 (2001), ¶ 51. *See also Broadband Today,* FCC Staff Report (Oct. 1999) at 42 ("[a]s deployment of DSL, satellite, and wireless advances, in large part spurred by rapid cable modem deployment, consumers will have alternative platforms to use for high-speed data access[.]"). *And see Fixed Wireless Competition Order,* ¶ 18-19 (noting growing competition among different broadband Internet access platforms).

[59] *See AOL/Time Warner Merger Order,* ¶ 312. Although the Commission suggested that its finding that residential high-speed Internet access services constitute a discrete product market might be limited to the specific context in which the issue had been raised, *id,* n.202, we are not aware of any basis upon which application of the *Merger Guidelines* could yield different product market definitions in different proceedings. In any event, the Commission has never, formally or informally, deviated from the view that

main competitor to cable in the market for residential high-speed Internet services is currently DSL[.]"[60]

The consensus among the FCC, DOJ, FTC, and academicians that broadband services for the mass market represent a discrete market product – and that DSL and cable modem services are both part of that same product market – is also shared by the industry analysts who study that market. They have issued a blizzard of reports during the past two years on the "battle for broadband customers" among cable operators, telephone companies, satellite, and fixed wireless providers.[61]

Even SBC's competitors in the advanced services market agree that DSL and cable modem service are part of the same product market. AT&T and MediaOne, for example, endorsing the Commission's finding, cited above, in the *First Advanced Services Report,* have argued:

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broadband Internet access services constitute a discrete product market. To the contrary, the Commission has in numerous other contexts treated the broadband Internet access market as a discrete product market.

60 *Id.* at ¶ 65.

61 *See, e.g.,* YANKEE GROUP, Cable Modem Providers Continue to Lead the High-Speed Internet Charge: The Yankee Group's Predictions on Consumer Broadband Services, August 2001. *See also* YANKEE GROUP, Residential Broadband: Cable Modems and DSL Reach Critical Mass, March 2001 (reporting on the "fight" for high-speed Internet subscribers between cable modems and DSL) MORGAN STANLEY DEAN WITTER, Telecom Trend Tracker: Defense is Best Strategy, August 17, 2001 at 15 ("[C]able modem competition also continues to remain a challenge" for the ILECs); ARNHOLD AND S. BLEICHROEDER, DSL: High Growth or False Hope, Aug. 16, 2001 at 15: ("In our view, there is already enough competition [for DSL services] from cable and satellite to ensure fair pricing of high-speed Internet services."); JP MORGAN AND MCKINSEY & CO., A Comprehensive Analysis of Demand, Supply, Economics, and Industry Dynamics in the U.S. Broadband Market, April 2, 2001 (describing the "battle" for new high-speed Internet subscribers between cable modem, DSL, and satellite providers). *And see* COMMUNICATIONS DAILY, *TW Cable Tops AT&T as Biggest High-Speed Provider, Study Shows,* Aug. 17, 2001 (explaining that study of broadband deployment by Warren Communications News' Telecom Research Group "looked at both cable modem and DSL services because technological methods of delivery were becoming less relevant than results. In the long run, these companies see themselves as competitors with each other[.]")

> in the near term cable modem service is likely to be one of many nearly equally attractive alternatives with counterbalancing benefits and drawbacks. … [M]ajor industry players have recently announced that they intend to invest billions of dollars in lots of different technologies used to provide last-mile broadband transport, such as DSL, satellites and fixed wireless. … In this regard, claims that DSL and satellites are fundamentally flawed as broadband alternatives appear to us to amount to little more than histrionics.[62]

Likewise, WorldCom has stated "the only alternative that AT&T's customers are likely to have to AT&T's broadband service is the broadband service offered by an ILEC."[63] And Time Warner (in comments jointly filed with AOL) has touted "the significant actual and potential competition affording consumers adequate choice across existing and emerging [broadband] platforms."[64]

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[62] Reply Comments of AT&T Corp. and MediaOne Group, Inc., CS Docket No. 99-251, Sept. 17, 1999, Declaration of Janusz A. Ordover and Robert D. Willig, ¶¶ 98-99. Although AT&T has argued that mass market broadband services do not comprise a complete product market, its position has been that the market is *broader* in scope, not that individual high-speed Internet access services comprise discrete product markets. Specifically, it has argued that such services are part of a larger market that also includes narrowband Internet access services. But as Crandall and Sidak note, "[w]hether one should include narrowband Internet services in the market is largely academic for present purposes." Since SBC is asking for non-dominant status only in its provision of DSL transport services, not narrowband transport services, a conclusion that narrowband and broadband Internet access services are part of the same product market would actually make SBC's case even stronger: It would mean that, even after the detariffing of SBC's broadband service, consumers would continue to have a regulated substitute service (a narrowband connection to an Internet provider) available to them. *Crandall/Sidak Declaration,*¶ 41.

[63] Comments of MCI WorldCom Inc., CS Docket No. 99-251, Aug. 23, 1999 at 8.

[64] Reply of America Online, Inc. and Time Warner Inc., CS Docket No. 00-30, May 11, 2000 at 16. In contrast to AOL, some ISPs may claim that, while DSL-based Internet access service competes with cable modem service, DSL transport service sold by SBC to ISPs does not. They may claim that because SBC sells its DSL transport service to ISPs, rather than directly to mass market consumers, its DSL prices are not constrained by cable modem pricing. Any such argument would be nonsense. Unless ISPs are making excess profits when they sell DSL service (which ISPs would presumably deny), they would have to pass on to consumers any price increase by SBC for DSL transport service. Thus SBC's DSL transport prices, no less than its DSL Internet service prices, are directly constrained by the retail price of cable modem service. *See Crandall/Sidak Declaration,* ¶ 39 n. 51.

The universally shared view - that broadband services for the mass market are all part of a single product market - is correct. As shown below and in the *Crandall/Sidak Declaration,* there is "no doubt" that these services are "reasonably interchangeable."[65]

First, from a functional standpoint, they are substantially similar. All of them offer the features that, surveys show, consumers value the most in broadband services: the ability to surf the web more quickly and efficiently; access to services and features that require high bandwidth; an "always-on" connection; and the ability to access the Internet and use their telephone at the same time.[66]

Second, consumers view these services as substitutes. Surveys show that potential subscribers to broadband services have no particular preference between DSL and cable modem platforms.[67]

Third, providers of mass market advanced services view themselves as competitors. Comcast's 2001 10K filing with the Securities and Exchange Commission makes plain that Comcast considers DSL to be its most important competitor. Likewise, the AT&T broadband services website includes a white paper that compares the functions of cable modem and DSL services. The white paper contends that "[b]oth xDSL and cable modem service will bring advances to customers, but cable's [hybrid fiber-co-axial] advantages with @Home's integrated solution ensure it will dominate."[68] AT&T Broadband's website for mass market customers includes answers to a list of "frequently asked questions," which make clear that AT&T views

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65 *Crandall/Sidak Declaration,* ¶ 34.

66 *Id.,* ¶ 35.

67 *Id.,* ¶ 36.

DSL and cable modem service to be competitive services. Excerpts from that list are shown in Table 1 below.

[68] "xDSL vs. Excite@Home's HFC/Cable Modem Network: The Facts," at http://www.google.com/search?q=cache:b-73obahgpo:www.bbs.att.com/cable/doc/xDSL-white-paper.pdf+&hl=en, June 21, 2001.

TABLE 1: EXCERPTS FROM AT&T BROADBAND WEBSITE[69]

What are the differences between AT&T high-speed cable Internet service and DSL?
AT&T high-speed cable Internet service delivers content directly to your personal computer via a cable connection, cable modem and customized software. AT&T Broadband provides the tools a customer needs to participate fully in the online community at speeds that blow traditional dial-up modems away. The result: a fast, high-speed cable Internet connection.

DSL, or Digital Subscriber Line is a modem technology that transforms ordinary phone lines (also known as "twisted copper pairs") into high-speed digital lines for fast Internet access. You must have a DSL modem and live within a certain distance of your telephone company's central office to get a DSL Internet service.

How much faster is the AT&T high-speed cable Internet service than DSL?
AT&T's broadband technology can offers lightning-fast speeds greater than dial-up phone modems and nearly every type of DSL service. For example, a file that takes nine minutes to download over a 28.8 phone modem may take two minutes on an Integrated Services Digital Network, or ISDN, a common type of DSL service, compared to as little as two seconds on AT&T Broadband network. Actual DSL speeds experienced by users connecting to the Internet will vary depending on:

- How far you live from the telephone company's central office
- The DSL product you're using
- The quality of your phone line
- Congestion on the Internet

In addition, many types of DSL service charge higher monthly fees for faster service. AT&T Broadband charges the same monthly rate for fast, consistent, cable Internet service.

Is it true that cable Internet services use a shared network platform while DSL services provide a dedicated line to my home?
Unless otherwise specified in the DSL package, DSL services dedicate a line from your home to the provider's central office, but that is where the dedicated connection ends and the bandwidth sharing begins. Internet traffic from your neighborhood meets at the provider's central office. Customers then battle for a connection to a Local ISP that is shared by residential users and possibly businesses.

AT&T Broadband operates its own global network that connects to the Internet at multiple locations. The network is based on a revolutionary network management model that is designed to overcome the performance limitations of the Internet.

AT&T Broadband 's network connects online information providers to regional data centers through an ultra high-speed network. These regional data centers then connect to local neighborhood hubs, which in turn transport data to customers. This network of neighborhood hubs and regional data centers optimizes Internet data traffic through cached Web sites and therefore minimizes the performance degradation often experienced when accessing content on the congested "public" Internet.

[69] http://www.attbroadband.com/services/other/InternetFAQ.html#17, June 19, 2001

That cable modem providers perceive DSL providers to be their direct competitors was further underscored recently when it was widely reported that a number of cable companies were refusing to sell advertising time to phone companies to promote DSL service.[70] When asked about this practice, the responses of the cable operators were revealing. Steve Lang of AT&T Broadband replied "We are not put on this planet to make life for our competitors easy." A spokeswoman for Charter Communications, a large cable operator based in St. Louis, said "this is the most direct competition to one of [our] core products and it would be cutting off [our] nose to spite [our] face to run it." The Vice President for Programming and Communications for Cox's San Diego operations said "[w]e routinely have taken the position of not taking advertising from our direct competitors." And Gerald Levin, Chief Executive Officer of AOL Time Warner, defended the refusal of his company to run DSL ads, stating that many types of media outlets can decline rival ads.

Fourth, the different conduits for different mass market broadband Internet access services are generally priced fairly similarly.[71] Indeed, the FCC has recognized that "cable Internet access providers and DSL operators offer services at around the same price[.]"[72]

For all of these reasons, it is clear that advanced services provided for use by mass-market customers are "reasonably interchangeable" and thus part of a discrete and relevant product market.

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[70] Seth Schiesel, "Cable Giants Refuse to Sell Ads to Internet Competitors," New York Times, June 8, 2001 at A1; Erik Wemple, "Cable Giants Hit Over ISP Ad Policies, Cable World, June 11, 2001.

[71] *See Crandall/Sidak Declaration,* ¶ 38.

[72] Seventh Annual Report, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming,* 16 FCC Rcd 6005 (2001), ¶ 53.

D. Advanced Services Provided To Larger Business Customers Represent A Discrete Product Market Without Relevant Sub-markets.

As explained above, the Commission's prior holdings – that packet-switched services comprise a discrete market, and that larger business services are distinct from mass-market services – indicate that there is a distinct product market for advanced services provided to larger business customers. SBC shows below that this is, in fact, the case.

There are two primary services in the larger business advanced services market: Frame Relay service and Asynchronous Transfer Mode ("ATM") service. The market also includes, at a minimum, two additional services: Switched Multimegabit Data Service ("SMDS") and Gigabit Ethernet service, both of which currently have limited deployment.[73] As demonstrated below, these services "are close substitutes for each other," but have "no other close demand substitutes."[74]

As an initial matter, all of these services rely on similar packet switching networks that operate independently from the public switched telephone network. These packet switching networks share several key technical characteristics. *First*, they have the same basic architecture, which consists of three main components: (1) a local facility between an end-user premises and a port on a packet switch; (2) a packet switch; and (3) transport between packet switches. *Second*, each of these networks is "public" in that they permit transmissions between any two points connected to the network. *Third*, while different packet switching networks use different

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[73] In addition, SBC has one DSL offering designed for business customers – Remote Local Area Network ("RLAN") – that is used principally by businesses to provide their employees with high-speed access from their homes to the corporate LAN. This service is provided on an extremely limited basis, however, with only about 4600 lines in service. The relatively insignificant scope of this service makes it inconsequential to the analysis here. In any event, there is significant competition for this service, both from the advanced services provided to larger business customers that are discussed below, as well as from advanced services, such as Excite@Work, that cable modem providers offer to business customers.

[74] *BOC Classification Order,* ¶ 31.

communications protocols, all such protocols are "connectionless" – that is, they permit transmissions between two points without first establishing a dedicated connection between them. *Finally*, each of these networks uses diverse routing, which permits highly reliable and secure communications.

Moreover, each of the services in this market is used principally for high-speed transmission. Two services in this market – Frame Relay and SMDS – are offered at the lowest speed at which a service becomes advanced (56 kbps) under the *SBC/Ameritech Merger Order*,[75] but even these services are typically used at much higher speeds.[76] For example, approximately 47 percent of Frame Relay revenues are from services provided at full DS-1 speeds (1.5 Mbps) or above, and an additional 25 percent are from services provided at fractional DS-1 speeds.[77] Likewise, approximately 47 percent of all SMDS ports are for services provided at full DS-1 speed or above, with an additional 4 percent provided at fractional DS-1 speeds.[78] ATM service is provided only at full DS-1 speeds or above, with the majority of ATM revenues coming from

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[75] Both of these services are offered at speeds as low as 56 kbps. *See* Ron Kaplan, IDC, *U.S. Packet/Cell-Based Services Market Forecast and Analysis, 2000-2005* (2001) ("*IDC Packet Switching Report*"). These services are accordingly "advanced services" pursuant to the *SBC/Ameritech Order*. *See SBC/Ameritech Order* App. C., Merger Conditions, at ¶ 2 (defining advanced services to include "wireline telecommunications services . . . that rely on packetized technology and have the capability of supporting transmission speeds of at least 56 kilobits per second in both directions.").

[76] The Commission has indeed recognized that Frame Relay and SMDS are "high-speed" services. *See*, *e.g.*, *2000 Biennial Regulatory Review--Comprehensive Review of the Accounting Requirements and ARMIS Reporting Requirements for Incumbent Local Exchange Carriers: Phase 2 and Phase 3,* Notice of Proposed Rulemaking, 15 FCC Rcd 20568, ¶ 69 (2000) ("Switched multi-megabit data service ('SMDS'), internet routers, and frame relay service are *high-speed* data telecommunications services built upon packet-switching technology. These services are widely offered to business customers for high-volume usage.") (emphasis added); *see also Crandall/Sidak Declaration,* ¶ 97.

[77] *IDC Packet Switching Report* at 17, Table 6.

[78] *IDC Packet Switching Report* at 110, Table 42. Data on the breakdown of SMDS *revenues* by access speed are unavailable.

services provided at DS-3 speeds (44 Mbps).[79] Gigabit Ethernet is typically offered at speeds of 1.25 Gbps.[80]

Given that the services in this market rely on similar packet switching networks, and are used primarily at high-speeds, they have become interchangeable from a functional standpoint.[81] Today, larger business customers use each of the advanced services in this market predominantly for the same basic function: to transmit data at high speeds between computers or networks of computers (*e.g.*, local area networks ("LANs") or wide area networks ("WANs")), or between those computers or networks and the Internet.[82] Although some services in this market also are capable of carrying voice traffic, this represents a very small percentage of what such services are used for today.[83]

Customers not only use the various services within this market for the same functions, but view the individual services within the market as functionally interchangeable with one

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79 *IDC Packet Switching Report* at 54, Table 19.

80 *See, e.g.,* http://www.yipes.com/technology.

81 *See Crandall/Sidak Declaration,* ¶ 97.

82 *See*, *e.g.*, Multimedia Telecommunications Association, Investext Rpt. No. 7044818, *Telecom-Market Review and Forecast '98 – Industry Report* at *10 (Jan. 1, 1998) ("LAN interconnection and access to the Internet are now nearly universal in the business marketplace. The focus has shifted to providing high-speed transmission for large volumes of data. Frame relay, ATM, T1/T3, ISDN, SMDS, Gigabit Ethernet, and fast modems are among the equipment and technologies enhancing the needs of local area network users.").

83 For example, analysts have estimated that, in 2000, voice-over-packet revenues were between $600 million and $1.4 billion in all of North America, whereas estimates for the packet switching market as a whole range from $7 billion to $12 billion in the U.S. alone. *See* Frost and Sullivan Press Release, *Voice and Data Convergence Goes Mainstream, VoIP Becomes Technology of The Future* (Aug. 6, 2001) (North American VoIP Services Markets wholesale revenues topped $314 million in 2000 and retail traffic accounted for $273 million in 2000); *Staying Ahead Of The Pack USA Datanet To Soon Offer New Services Series: Progress 2001*, Syracuse Herald American at AA12 (Feb. 4, 2001) (Probe Research of New Jersey estimates global revenue from voice-over-packet telephony at $720 million in 2000); R. Rosenberg, *IP Telephony Vs. Circuit-Switching*, CED Buyer's Guide Supplement (Nov. 15, 2000) (North American voice over packet revenues estimated at $1.4 billion in 2000).

another.[84] For example, customers have been migrating from SMDS to Frame Relay service for many years, and SMDS is expected to be almost completely replaced by new advanced service technologies within the next few years.[85] Frame Relay is still growing at a steady rate; however, customers are increasingly migrating from Frame Relay to ATM.[86] And more recently, customers have begun to view new services like Gigabit Ethernet as a substitute for both ATM and Frame Relay.[87]

Service providers likewise view the services in this market as interchangeable with one another.[88] For example, AT&T, [89] WorldCom,[90] Sprint,[91] and other carriers[92] all advertise ATM

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84 *See Crandall/Sidak Declaration,* ¶ 98.

85 IDC Packet Switching Report at 4, 17.

86 *See*, *e.g.*, Stratecast Partners, *ATM and Frame Relay Market Assessment* at 13 (Sept. 2001) ("*Stratecast Report*") ("ATM's biggest appeal will continue to at the high-end of the market, where companies can cost justify the use of the technology for their application requirements. At the low-end of the market, the technology will continue to be challenged by frame relay."); Multimedia Telecommunications Association, Investext Rpt. No. 7044821, *Telecom-Market Review & Forecast '98-Lan-Wan Netwk Mkt* (Jan. 1, 1998) ("Current users of ATM fall into four general categories: ISPs; government, medical, and educational institutions; companies with heavy LAN interconnect requirements; and frame relay users with the need to connect high-capacity sites.").

87 *See*, *e.g.*, V. Wortman, *The Real World of Integrated Networks; Industry Trend or Event*, Business Communications Review (April 1, 2001) (stating that the North Kansas City Hospital, when looking to establish a "secure, point-to-point network," "considered alternatives including Gigabit Ethernet**,** but settled on ATM as a better performer that was not much more expensive."); T. Wilson, *Gig Ethernet Surpassing ATM as Backbone*, Internetweek (Jun. 4, 1999) (information officer, Seton Hall University, "If I were starting our [backbone revamp] today, I would find Gigabit Ethernet very attractive.").

88 *See Crandall/Sidak Declaration,* ¶ 99.

89 J. Jones, *AT&T Readies Outsourced E-mail, Network Services*, Infoworld Daily News (Jan. 24, 2000) (AT&T states that its Managed ATM service is "aimed at enterprises migrating out of total reliance on frame-relay networks to newer technologies such as ATM or frame relay-to-ATM service interworking."); AT&T Corp., Data and IP Services, Products and Services, ATM http://www.ipservices.att.com/brochures/atm.pdf (AT&T's High Speed Packet Network . . . enables you to migrate your network smoothly and gradually, on a location by location basis, from frame relay to ATM.")

service as a replacement for Frame Relay service. Various service providers also have recognized that new services like Gigabit Ethernet are "cannibalizing" existing services like Frame Relay and ATM.[93]

Finally, advanced services offered in the larger business market are priced at similar levels.[94] For example, under SBC's tariff, a DS-3 link and port for Frame Relay service in SBC's central region costs $4,435 per month (under a one-year contract) plus a $3,030 non-recurring charge.[95] By comparison, a DS-3 link and port for ATM service in SBC's central region costs $3,950 per month (under a one-year contract) plus a $3,000 non-recurring charge.[96]

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[90] MCI WorldCom, Inc., Products and Services, ATM, http://www.worldcom.com/us/products/datanetworking/atm/index.phtml.) (WorldCom's Frame Relay to ATM Service Interworking (FRASI) "provides a pathway of migration for today's frame relay networks to the comprehensive networking capabilities of ATM.").

[91] *See* Sprint Corp., Sprint Business, Products and Solutions, Data, ATM, ATM and Frame Relay Technical Report, http://www.sprintbiz.com/business/resources/resource/SPR6859c.pdf ("Once your data or multimedia applications outgrow frame relay's bandwidth limitations, Sprint can assist you in developing a gradual migration path to ATM.")

[92] *See, e.g.*, Adelphia Business Solutions, Products, Frame Relay http://www.adelphia-abs.com/html/products/frdatasheet.pdf ("Frame relay can reduce your company's operating costs, while improving your network performance and simplifying network management. Plus, it can help companies prepare for future network growth by providing a migration path to Asynchronous Transfer Mode (ATM) technology."); Equant First Global Carrier to Integrate Voice and Data Over ATM, IP and Frame Relay, Global News Wire, CCN Disclosure (Apr. 22, 2000) ("Employ Equant's new frame relay-to-ATM enhancement to seamlessly migrate from frame relay to ATM at speeds from 2Mbps and above, without having to install costly equipment to facilitate the conversion").

[93] *See*, *e.g.*, *Putting romance back in the data business; Company Business and Marketing*, CommunicationsWeek International at 1 (Feb. 5, 2001) (quote of Ron Beaumont, COO, WorldCom: "when we introduce IP VPNs we are going to cannibalize some of our frame relay business."); A. Dornan, *Is There an Afterlife for ATM?*, Network Magazine at 76 (May 7, 2001) (Foundry Networks: "We have a lot of customers who have migrated off ATM to Gigabit Ethernet, but a lot of people are adamant about wanting to run both.").

[94] *See Crandall/Sidak Declaration* ¶ 100.

[95] SBC Advanced Solutions Inc., Advanced Services Tariff, Tariff F.C.C. No. 1 § 5.4 (Sept. 10, 2001).

[96] *Id.* § 4.4.

Likewise, AT&T charges $3,130 per month for Frame Relay service at DS-1 speed,[97] and charges the identical amount for ATM service at DS-1 speed.[98]

In short, because these services are functionally similar and viewed as such by customers and suppliers, and because they are priced similarly, they comprise a discrete product market with no relevant sub-markets.

E. The Relevant Geographic Market For Purposes Of Analyzing Competition In Both Product Markets Is SBC's In-Region Territory.

Like long-distance traffic, a high-speed connection to the Internet "at its most fundamental level, involves a customer making a connection from one specific location to another specific location." As with a long-distance voice call, customers do not view broadband connections originating in different locations to be close substitutes for each other. Thus, each point-to-point market represents a separate geographic market for mass market advanced services. As noted, though, the Commission does not assess competition in every point-to-point market. To the contrary, it will only assess competition in a particular market or group of markets if there is credible evidence that there is or could be a lack of competitive performance in such market(s). In the *BOC Classification Order,* the Commission held that the level of competition could differ inside and outside a BOC's service area. Consistent with that holding, we assume, for purposes of our analysis, that the relevant geographic market for both mass market and larger business advanced services is SBC's in-region service area. As shown below, there are no other point-to-point markets within SBC's service area that require separate analysis.

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97 *See* IDC Frame Relay Study at Table 26.

98 *See Crandall/Sidak Declaration,* ¶ 100. *See IDC ATM Study* at Table 21. SBC's DS-1 Frame Relay service is slightly cheaper than its ATM service at comparable speeds.

1. Mass Market Services.

As Crandall and Sidak show, there is no credible evidence that there is any particular point-to-point market or group of point-to-point markets within SBC's territory in which SBC could exercise market power in the provision of DSL transport services. There are more than one dozen providers of cable modem service in SBC territory. The leading providers all have upgraded the vast majority of their plant so that it is capable of providing cable modem service.[99] Indeed, the National Cable & Telecommunications Association reports that cable plant serving 83% of all U.S. households will be capable of providing cable modem service by the end of this year.[100] In stark contrast, SBC can offer DSL service to about half of its customers.[101]

Because upgraded cable plant is so ubiquitous, there are likely to be few, if any, customers to whom DSL, but not cable modem, service is available. But even if there are a handful of such customers, they would still have other broadband options. Conceivably they could obtain DSL service from a CLEC. Alternatively, they could obtain broadband Internet access service from a satellite or fixed wireless provider. Although wireless technologies still account for a relatively small share of the broadband Internet access market, they are ubiquitously available and growing rapidly.[102] For example, the Strategis Group predicts that the number of U.S. satellite subscribers will grow to more than four million by 2005.[103] To be sure, upload speeds for satellite broadband services are slow, but as Professors Janusz Ordover and

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99 *See Crandall/Sidak Declaration,* ¶¶ 43-44.

100 *Id.,* ¶ 44, *citing* information obtained September 25, 2001 from NCTA's web site at http://www.ncta.com/industry_overview/indStat.cfm?indOverviewID+2.

101 *Id.,* ¶ 45.

102 *Id.,*¶ 46.

103 *Id.*

Robert Willig have testified on behalf of AT&T, such concerns are "irrelevant to the vast majority of users, who, if they worry about speed at all, are primarily interested in fast download times and do not send significant amounts of information."[104] Moreover, many of the consumers to whom cable modem service is unavailable are likely users of DBS video service. (Indeed, cable modem service may be unavailable to these customers precisely because they chose DBS service for video.) Having already chosen a satellite-based service for video, these customers likely would be receptive to satellite service for their Internet access as well.

As for fixed wireless service, that too is a nascent, but growing, option. Frost & Sullivan project that there will be over 400,000 fixed wireless broadband subscribers nationally by the end of this year. Irrespective of whether this prediction holds true, fixed wireless service, like satellite service, "can be expected to fill any niche in which competition between DSL and cable modem service is less vigorous."[105]

2. Larger Business Services.

There also is no credible evidence that there is any particular point-to-point market or group of point-to-point markets in which SBC could exercise market power in the provision of advanced services to larger business customers.

First, from a demand-side perspective, customers that purchase packet switching services typically seek to connect multiple points that often are widely dispersed. For example, SBC's average Frame Relay customer orders four PVCs, which means that they use this service to connect between five and eight different points. SBC's average ATM customer orders two

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[104] Reply Comments of AT&T Corp. and MediaOne Group, Inc., CS Docket No. 99-251, Sept. 17, 1999, Declaration of Janusz A. Ordover and Robert D. Willig, ¶ 100.

[105] *Crandall/Sidak Declaration*, ¶ 48.

PVCs, which means they use this service to connect either three or four different points. This is consistent with independent data showing that the average frame relay customer nationwide purchases a total of 12 switching ports, and that the average ATM customer nationwide purchases a total of 5 switching ports, because there is a close correlation between the number of switching ports a customer purchases and the number of distinct points it wishes to connect.[106] Moreover, many packet switching customers seek to connect not only multiple points within a single LATA, but also points within multiple LATAs or even in foreign countries. Indeed, only twelve percent of all Frame Relay and ATM revenues are from the provision of such services on a purely "local" basis.[107]

Second, from a supply-side perspective, the competitive alternatives available throughout SBC's region are largely uniform. As described in more detail below, the three largest providers of packet switching services to business customers in SBC's region – and, for that matter, in the entire country – are AT&T, WorldCom, and Sprint. Nationwide, these three carriers account for roughly two-thirds of all revenues for packet switching services provided to business customers.[108] As these three carriers routinely state, they have ubiquitous packet switching services networks that are capable of serving customers anywhere.[109] In addition, numerous

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106 *See Crandall/Sidak Declaration,* ¶ 104, *citing* IDC ATM Study at 7.

107 *See Crandall/Sidak Declaration,* ¶ 105; IDC Packet Switching Report at 24, 61.

108 *See Crandall/Sidak Declaration,* ¶ 106.

109 *See*, *e.g.*, AT&T Corp., High Speed Packet Services, AT&T Frame Relay and ATM Services, http://www.ipservices.att.com/brochures/atm.pdf ("As the frame relay market leader, AT&T has the largest frame relay network," which includes "620 domestic Points of Presence (POP) so local access circuit mileage is minimized."); Mehta, Suketa, Telcos: answering the call for ATM, LAN Magazine, March 1996 (quoting AT&T spokesman: AT&T's ATM network can offer service "virtually nationwide" – "Wherever a customer is, we'll get them into the network."); Sprint Corp., Sprint Business, Dedicated Access, Service and Support http://www.sprintbiz.com/esolutions/dedicated_access/service.html (Sprint has 320 domestic POPs for its packet switching network as well as 207 SONET Rings); MCI WorldCom, Inc., US Products, Data Networking, Frame Relay

other competitive carriers also provide packet switching services to business customers throughout SBC's region. For example, in SBC's region there are more than 50 CLECs that currently provide one or more packet switching services to business customers.[110] Among the largest of these competitive carriers, for example, McLeod provides packet switching services to business customers in at least 34 major cities in SBC's region.[111] Allegiance serves at least 27 SBC cities; Global Crossing and XO each serves at least 18; Pac West serves at least 15; and Time Warner Telecom serves at least 10.[112]

IV. SBC DOES NOT HAVE IN-REGION MARKET POWER IN THE PROVISION OF ADVANCED SERVICES TO MASS MARKET CUSTOMERS.

Just six weeks ago, an article in *Barron's,* the Dow Jones Business and Financial Weekly, proclaimed "the cable television industry is clobbering the telephone companies in the race to bring high-speed Internet connections to American homes." "[T]he reports from the broadband front," the article continued, "are shockingly one-sided. Cable modems are swamping the high-speed data connections being offered by the telephone industry called digital subscriber lines, or DSL." Moreover, it stated, [l]eading cable analysts Douglas Shapiro of Banc of America

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http://www.worldcom.com/us/products/datanetworking/framerelay/index.phtml (WorldCom has more than 700 POPs for its packet switching network – including more than 400 for Frame Relay Service.); *id.* ("By leveraging our metropolitan local fiber networks, WorldCom can provide metro pricing for Frame Relay service to more than 350 metropolitan areas . . . across the U.S.").

110 *See Crandall/Sidak Declaration,* ¶ 107; New Paradigm Resources Group, Inc., *CLEC Report 2001*, Ch. 13 (14th Ed. 2001) *("CLEC Report 2001").*

111 *See Crandall/Sidak Declaration,* ¶ 107; *CLEC Report 2001*, Ch. 13, Allegiance at 17-18, Global Crossing at 12-13, Pac West at 9-10, Time Warner Telecom at 18-19, XO at 16-17.

112 *See Crandall/Sidak Declaration,* ¶ 107; Time Warner Telecom, Products and Services, Business Product Category, Broadband Internet and Data Services, http://www.twtelecom.com/broadband.html. ("The local Internet POPs are connected via diverse-routing Packet-over-SONET circuits through our core routers to form regional IP networks. Each regional network is then interconnected with each other to form the Time Warner Telecom national IP backbone. Additional local/regional circuits are dedicated for private and public peering arrangements for redundant IP traffic management.")

Securities and Richard Bilotti of Morgan Stanley both are forecasting that cable will exploit its first-mover advantage to keep its lead through the middle of this decade. And by then the war will be essentially over."

The *Barron's* article went on to quote leading executives from the cable industry. Stephen Burke, president of Comcast's cable division "gloat[ed]:" "We're beating DSL 80% of the time in our franchise areas[.]" Joseph Collins, former head of Time Warner Cable and now chairman of AOL Time Warner's new interactive video division claimed "that he hasn't seen a public clamor for a new cable product like the one for cable modems since HBO began transmitting its signal by satellite in 1975 and people literally chased down company trucks in their neighborhoods to get hooked up."

This *Barron's* report is by no means the only report trumpeting the success of cable companies in the consumer broadband market. A study released this summer by Multimedia Research Group predicted that cable companies will continue to "dominate" the U.S. broadband market. And virtually all analysts that follow the industry agree. In addition to Morgan Stanley and Banc of America, the Yankee Group, Forrester, Gartner Dataquest, Jupiter, and Forward Concepts all predict that cable modem service will far outpace DSL service through the middle of the decade. *See* Table 2.

Table 2[113]

Forecasts for U.S. DSL, Cable Modem, Broadband, Online, Fixed Wireless & Satellite Households

DSL (millions)

Information Source	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Forrester (10/00)	1.25	2.96	6.61	10.07	14.06	17.75	
Yankee Group (8/01)		3.30	5.00	6.70	8.40	10.50	
Gartner Dataquest (6/00; pub 12/00)	1.49	3.00	5.32	7.52	9.81		
Jupiter (00Q4)	1.19	2.53	4.44	6.76	9.29	11.76	
Forward Concepts (2000)	2.00	3.40	5.00	7.40	10.50		

Cable Modem (millions)

Information Source	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Forrester (10/00)	3.74	7.76	11.42	15.81	19.43	22.42
Yankee Group (8/01)		7.00	9.60	11.90	14.00	15.70
Gartner Dataquest (6/00; pub 12/00)	3.35	5.87	8.80	11.45	13.74	
IDC (04/01)	3.80	6.50	9.60	13.00	16.60	20.40
Jupiter (00Q4)	3.38	5.54	7.87	10.123	12.09	13.84
Forward Concepts (2000)	3.40	5.70	7.90	10.50	14.50	

Broadband Households (millions)

Information Source	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Forrester (6/01)	6.70	10.80	18.80	29.30	40.00	48.60	54.40
Yankee Group (1/01)	5.10	9.60	14.80	20.10	26.00	30.80	
Gartner Dataquest (6/00; pub 12/00)	6.00	11.00	17.30	23.10	28.90		
Jupiter (00Q4)	4.78	8.60	13.29	18.54	23.80	28.80	
Forward Concepts (2000)	5.40	9.10	12.90	17.90	25.00		

[113] Jupiter information obtained from a research summary, not actual report. Gartner Dataquest information has been updated with an April 23, 2001, market analysis containing the figure "Demand for High-Speed Access among U.S. Online Households" – SBC does not have access to this analysis.

The Commission, itself, has recognized that LECs do not have market power in their provision of DSL service. It has noted "a continuing increase in consumer broadband choices within and among the various delivery technologies,"[114] that "no group of forms or technology will likely be able to dominate the provision of broadband services,"[115] and that "the preconditions for monopoly appear absent" in the consumer broadband market.[116]

This petition, therefore, breaks no new ground with respect to advanced services provided for use by mass-market customers. It simply asks the Commission to reaffirm what it and virtually every industry expert has previously recognized: that LECs in general, and SBC, in particular, have no market power in this market.

All of this is confirmed by an application of the Commission's traditional test for non-dominance. We proceed with that analysis below.

A. SBC's Competitors Have Captured Two Thirds Of The Broadband Internet Access Market And Are Exhibiting Faster Growth Than SBC.

When the Commission declared AT&T to be non-dominant in the provision of domestic interstate interexchange services, AT&T's market share of such services was estimated to be sixty percent.[117] Likewise, AT&T's share of the international message telephone service market was estimated to be sixty percent when AT&T was declared non-dominant in the provision of

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114 *Fixed Wireless Competition Order,* ¶ 19.

115 *Id.*

116 *First Advanced Services Report,* ¶ 48. *See also Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Tranferor, to AT&T Corp., Transferee,* 15 FCC Rcd 9816 (2000) (*AT&T/MediaOne Merger Order*), ¶¶ 116-119 (finding "significant actual and potential competition" cable modem service from alternative broadband providers); *UNE Remand Order* at ¶ 308 *quoted at n. 9 supra.*

117 *AT&T Reclassification Order,* ¶ 62.

those services, and in a number of countries, AT&T's market share was significantly higher.[118] In contrast, as shown in the *Crandall/Sidak Declaration*, SBC's share of the market for mass market advanced services in its region is only about thirty percent.[119]

As Crandall and Sidak explain, this market share data should be dispositive. Although the Commission has correctly recognized that, in certain circumstances, market share data are not necessarily a reliable indicator of market power; indeed, it did so in the context of a company (AT&T) that had a relatively large, but declining, market share in an industry characterized by high demand and supply elasticities. In that context, the FCC properly recognized that market share is not necessarily indicative of market power.

But while a large market share does not, in itself, show market power, a low market share generally indicates a *lack* of market power. That is because firms with low market share usually cannot affect the price of a product by restricting their output.[120] The Commission recognized this in the *BOC Classification Order* when it noted that the ability to raise one's prices by restricting one's output "usually requires a large market share."[121] Antitrust authorities also have recognized that a low market share is generally indicative of a lack of market power.[122]

To be sure, the Commission declined to give dispositive weight to the zero market shares of the BOC affiliates in the *BOC Classification Order*. Rather, while recognizing that this

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118 AT&T's average market share in 76 select countries was 74%, and AT&T faced no competition at all in four countries. *Motion of AT&T Corp. to be Declared Non-Dominant for International Service,* 11 FCC Rcd 17963 (1996), ¶ 40.

119 For the sources of this market share data, *see Crandall/Sidak Declaration* at ¶¶ 54-56.

120 *Crandall/Sidak Declaration,* ¶¶ 57-58.

121 *BOC Classification Order,* ¶ 83.

122 ABA Antitrust Section, Antitrust Law Developments, 213-214 (3d ed. 1992). *See also United States v. Aluminum Co. of America,* 148 F.2d 416-424 (2nd Cir. 1945) (it is doubtful whether a 60 percent market share would constitute a monopoly, and certainly 33 percent is not).

market share "suggests that the affiliate will not initially be able to raise prices by restricting output," the Commission deemed it necessary to address whether the BOC might quickly acquire a high market share after entry into the market. As Crandall and Sidak point out, that concern is inapt here:

> [The *BOC Classification Order* addressed] a BOC entering a new market for the first time. In the present case, in contrast, SBC has been actively competing in the broadband Internet access market for two years. The Commission need not speculate about whether SBC, upon entry or soon thereafter, can acquire market power in broadband services. In two years of making broadband deployment a top company priority, SBC has not come close to doing so.[123]

Indeed, they note, "far from acquiring market power, telephone companies have *lost* ground to their cable competitors in the broadband Internet access market."[124] According to an FCC report issued August 9, 2001, cable companies added 2.2 million cable modem lines last year, while telephone companies added only 1.6 million DSL lines. The Yankee Group claims that the gap was even greater – 2.6 million cable modem lines versus 1.3 million DSL lines.

Whichever number is correct, one thing is for sure: telephone companies are not on the verge of erasing the cable companies' lead in the broadband Internet access market. Their low market share is not ephemeral. In fact, cable companies are not merely adding more subscribers than telephone companies; they are doing so by *increasing* margins. Thus whereas cable operators won 59% of new broadband subscribers in the first quarter of 2001, they won 64% in the second quarter.[125]

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123 *Crandall/Sidak Declaration*, ¶ 59.

124 *Id.,* ¶ 60.

125 MORGAN STANLEY DEAN WITTER, Telecom Trend Tracker, Aug. 17, 2001, p. 15. *See also* Shawn Young, "How Do I Choose between Cable Modem and DSL?," *Wall Street Journal,* Sept. 10, 2001 at

B. Mass Market Users Of Broadband Services Have Highly Price-Elastic Demand.

As noted above, SBC's low market share, in itself, shows that SBC lacks market power in the provision of advanced services used by mass market customers. The fact that, as shown below, mass-market users of advanced services exhibit highly elastic demand for such services confirms that SBC does not have market power in its provision of DSL services.[126]

In previous orders assessing market power, the Commission has relied exclusively on indirect evidence of demand elasticity. In the *AT&T Reclassification Order,* for example, it based its finding of high demand elasticities in the long-distance market on evidence of high churn rate among AT&T 's mass market and its previous finding that larger business customers have highly price-elastic demand.[127]

Crandall and Sidak, however, present not only the type of indirect evidence of high demand elasticities on which the Commission has relied in the past, but also direct quantitative evidence of the own-price elasticity of demand for mass market broadband Internet access services.[128] As they show, the own-price elasticity of demand (the percent change in demand for every one percent increase in price) is between –1.184 and –1.462. Stated differently, for every one percent increase in the price of DSL service, demand drops by an amount between 1.184 and 1.462 percent. Significantly, this estimate of the own-price elasticity of demand is based on a study that was conducted by academicians with no connection to this proceeding or to SBC. In

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R15 (citing Merrill Lynch report that cable companies added 667,000 subscribers in the second quarter, compared with 374,000 new DSL subscribers).

126 *See Crandall/Sidak Declaration,* ¶¶ 62-71.

127 *See id.,* ¶ 62.

128 *See id.,* ¶¶ 63-67.

fact, the higher estimate (-1.462) in the range reflected their estimate of the own-price elasticity of demand. Because their conclusion was based on data from the first quarter of 2000, Crandall and Sidak decided to update it using nearly the identical econometric model and data from the fourth quarter of 2000 and the first quarter of 2001. The conclusion of both studies – that an increase in the price of DSL service decreases total revenues – is direct and compelling evidence of high elasticity of demand.

This direct evidence of high demand elasticities is corroborated by the very type of indirect evidence on which the Commission has relied in its consideration of demand elasticity in previous proceedings.[129]

For example, SBC's churn rate is extremely high. In the *AT&T Reclassification Order,* the Commission concluded that residential users of long-distance services had highly price-elastic demand based on evidence that as many as twenty percent of AT&T's residential customers switch carriers at least once a year. The Commission found that "[t]his high churn rate among residential consumers … demonstrates that these customers find the services provided by AT&T and its competitors to be very close substitutes."[130]

The churn rate for SBC's DSL service is well above that reported by AT&T. Between January and July 2001, SBC's churn rate was 5.7% monthly – almost three times the rate on which the FCC relied in concluding that long-distance consumers exhibit high demand-elasticity.[131]

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129 *See id.,* ¶ 67.

130 *AT&T Reclassification Order,* ¶ 63.

131 *See Crandall/Sidak Declaration,* ¶ 68.

Further evidence of high demand elasticity can be found in customer surveys, which show that the features that consumers most value from broadband Internet access service offerings are not unique to DSL service. Specifically, as noted above, these surveys show that consumers choose a broadband Internet access service primarily for four reasons: (1) to increase the speed and efficiency with which they can surf the web; (2) to gain access to applications that require high bandwidth; (3) to obtain an "always-on" connection; and (4) to free up their telephone line when they are using the Internet. The fact that each of these features is available, not just from DSL service, but also from other broadband platforms, including cable modem service, suggests that there are high cross-elasticities of demand between DSL and the other platforms that offer these features. And, in fact, customer surveys confirm that this is the case.[132] When asked point-blank, large numbers of consumers who were interested in subscribing to a broadband Internet access service indicated that they had no preference between a DSL or a cable modem platform.[133]

Finally, like business customers, users of broadband Internet access services tend to be more sophisticated and knowledgeable about the services they use than is the average consumer. They are more likely to be aware of the various options available to them, and they are more likely to make an informed choice with respect to those options.[134] The Commission placed substantial weight on this consideration in both the *AT&T Reclassification Order* and the *AT&T Streamlining Order*.

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132 *See Crandall/Sidak Declaration,* ¶ 69.

133 *See* YANKEE GROUP, "Residential Broadband: Cable Modems and DSL Reach Critical Mass," March 2001 at Exhibit 12.

134 *Id.* at 7; *see Crandall/Sidak Declaration,* ¶ 70.

For all these reasons, there is substantial direct and indirect evidence that there is high price-elasticity of demand among mass-market users of DSL services. This evidence further confirms that SBC is not dominant in its provision of DSL transport service.

C. SBC's Competitors Could Absorb Immediately, And Without Additional Investment, Large Numbers Of SBC's DSL Subscribers.

A third factor the Commission has considered in determining whether a firm has market power is supply elasticity - *i.e,* the extent to which existing or new competitors can absorb new customers, both immediately and incrementally, over time. This inquiry seems superfluous, given SBC's low and stagnant market share, but here, again, the evidence only confirms that SBC lacks market power in the provision of advanced services to mass market customers.

In the *AT&T Reclassification Order,* the Commission concluded that supply elasticities in the domestic long-distance market were high based on evidence that AT&T's competitors "can add significant numbers of new customers with their existing capacity and add incrementally to this capacity as new customers are added to their networks."[135] The same is true with respect to SBC's provision of mass-market broadband Internet access services. As many as four fifths or more of all homes in the United States are passed by cable facilities that are capable of providing cable modem service, and there is no reason to believe the number is any less in SBC's region.[136] According to NCTA, more than 81 million homes will be passed by cable modem service at the end of 2001. Yet only six or seven million of these households will subscribe to cable modem

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[135] *AT&T Reclassification Order*, ¶ 57. AT&T had submitted uncontroverted evidence that its competitors could immediately absorb, without additional investment, 15% of AT&T's switched demand, and that they could absorb additional customers over time – amounting to almost two thirds of AT&T's switched traffic after one year. *Id.* at ¶ 47.

[136] *See* Section III(E) *supra.*

service at that time. Thus cable operators have facilities in place that will enable them to expand their capacity to meet customer demand *twelve-fold*.

To put this massive capacity in perspective, consider the following: SBC currently provisions about 1.1 million DSL lines. Assuming that one third of the 83 million homes passed by cable modem service and one third of the 6.5 million or so cable modem subscribers are in SBC's territory, then cable operators have facilities in place to serve more than 25 million additional customers in SBC territory alone – *i.e.,* 23 times SBC's entire customer base.

To be sure, if cable operators did take on so many new customers, they would eventually have to install additional downstream capacity to avoid degradation in service quality. But additional downstream capacity could be added on an as-needed basis as more and more customers were added, and the incremental cost of this investment, when averaged across all new subscribers, would not be excessive. In fact, cable operators would not be upgrading so much of their plant if the cost of this capacity was prohibitive.[137]

Of course, the Commission need not theorize on the rate at which cable operators can absorb new subscribers. It can simply look at the facts. Despite a recent slowing of growth, the five largest cable operators alone added more than 600,000 cable modem subscribers in the second quarter of 2001.[138] Assuming again that one third of these additions were in SBC territory, then those cable operators added in SBC territory in the ordinary course of business in one quarter the equivalent of more than 18% of the number of SBC's DSL lines in service. That growth rate alone is more than enough to constrain SBC's pricing of DSL service.

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137 *See also Crandall/Sidak Declaration* at ¶ 74.

138 "TW Cable Tops AT&T as Biggest High-Speed Provider, Study Shows," Communications Daily, Aug. 17, 2001 at 2 (*citing* report by Warren Communications News' Telecom Research Group).

D. SBC Faces Disadvantages, Not Advantages, In The Broadband Market.

A fourth factor the Commission considers in determining whether a firm is dominant in the provision of a service is whether that firm enjoys advantages in the market by virtue of, *inter alia,* its size, financial strength, resources, or cost structure. The issue with respect to this inquiry, the FCC has repeatedly emphasized, is not whether the firm at issue has advantages in the relevant market, but "whether any such advantages are so great as to preclude the effective functioning of the competitive market."[139] Indeed, as the FCC recognized, "the competitive process itself is largely about trying to develop one's advantages, and all firms need not be equal in all respects for this process to work."[140]

As shown herein, SBC does not enjoy any overall advantages in the market for mass market advanced services. It certainly does not have advantages that are "so great [that they] preclude the effective functioning of a competitive market."[141]

Before turning to the specifics of its analysis, SBC starts with a basic and obvious point: *if* SBC had such enormous advantages in the high-speed Internet access market, it would already have acquired market power in that market, or it certainly would be well on its way. Surely it would not be *losing* ground to its cable competitors. But, as noted above, the cable operators in SBC's region have recently increased their market share, and they win about twice as many new subscribers as does SBC. Moreover, the analysts who study and make predictions about this

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[139] *AT&T Reclassification Order,* ¶ 73; *AT&T Streamlining Order,* n.187. *See also COMSAT Non-Dominance Order* at 14130.

[140] *AT&T Reclassification Order,*¶ 73.

[141] *AT&T Reclassification Order*, ¶ 73 (*citing AT&T Streamlining Order,* 6 FCC Rcd at 5891-92).

industry uniformly project that cable modem service will continue to outpace DSL service at least through 2005. *See* Chart 2, *supra.*

Turning, nevertheless, to the issue of SBC's size and resources, SBC competes in its provision of high-speed Internet access services, against, among others, the following cable carriers: AOL Time Warner (market capitalization of $147 billion), AT&T Corp. (market capitalization of $68 billion), Comcast Corp. (market capitalization of $34 billion), Cox Communications, Inc. (market capitalization of $25 billion), and Cablevision Systems Corp. (market capitalization of $7 billion).[142] As Crandall and Sidak state, under no stretch of the imagination could these be called fledgling competitors who lack the size, resources, or financial stability to compete with SBC. Indeed, the rate at which they are upgrading their cable facilities in itself belies any such claim.[143]

Nor does SBC enjoy cost advantages vis-à-vis its competitors that effectively preclude competition. In fact, it is far more likely that SBC faces cost *disadvantages* relative to its cable competitors. According to analyst reports, the costs of deploying DSL service exceed the cost of

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142 *See Crandall/Sidak Declaration,* ¶ 79.

143 The financial strength and resources of SBC's cable competitors has been boosted significantly by consolidation within the cable industry. As discussed in a recent report by the Yankee Group, consolidation has provided a wide range of cable operators with the resources necessary to upgrade their facilities for high-speed Internet access services:

> One of the most significant consequences of cable industry consolidation has been its effect on cable modem deployment. Prior to consolidation, the high cost of upgrading to the two-way cable modem-capable infrastructure required for true [high speed Internet] access (as well as for digital cable) meant that smaller operators were limited in how quickly, if at all, they would be able to make the transition. Today, however, many of these operators are owned by the likes of Charter Communications, Adelphia, Cox, and Comcast. Even second-tier MSO like Mediacom and Classic Cable are gaining the necessary scale by acquiring smaller systems.

See YANKEE GROUP, "Residential Broadband: Cable Modems and DSL Reach Critical Mass," March 2001 at 4.

deploying cable modem service. For example, an analysis by JP Morgan and McKinsey & Company concludes that DSL providers face incremental costs of $792 per customer, while cable modem providers face an incremental cost of only $468.[144] That same study concludes that the average cost per customer of a large ILEC undertaking a massive DSL deployment is currently $86 per month per customer.[145] That cost, they conclude, will decline by 2005 to $38 per month per customer. In contrast, the average, per-customer cost of providing cable modem service is estimated to be $55, declining by 2005 to $30.[146] At no point during the next five years is the average cost of providing DSL service less than the average cost of providing cable modem service. To the contrary, the costs of cable modem providers remain substantially lower throughout that period.

The conclusion by JP Morgan and McKinsey that cable modem costs are lower than DSL costs is echoed in an August 2001 report by the Yankee Group. That report predicts that "[c]able modem prices are likely to remain cheaper than DSL prices for comparable service levels due mainly to the low service provision costs on the part of MSOs."[147]

DSL providers also face significant technological constraints. For example, absent costly additional investment, DSL cannot reach customers whose copper loops exceed 18,000 feet in length. Although cable operators face their own constraints due to their service architecture, they

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144 JP MORGAN AND MCKINSEY & CO., "Broadband 2001, A Comprehensive Analysis of Demand, Supply, Economics, and Industry Dynamics in the U.S. Broadband Market," April 2, 2001, at Charts 43 and 44.

145 *Id.* at Chart 45.

146 *Id.* at Chart 46.

147 YANKEE GROUP, Cable Modem Providers Continue to Lead the High-Speed Internet Charge: The Yankee Group's Predictions on Consumer Broadband Services, August 2001.Yankee Group August 2001 Report at 4.

do not face distance limitations that significantly impair their ability to reach large numbers of customers.

The advantages enjoyed by cable operators are compounded by disparately applied regulatory requirements. As stated by SBC and BellSouth in their Joint Comments in the *Cable Open Access* proceeding:

> Telephone companies have to "unbundle" the wireline spectrum that they use for broadband … and make it available to all comers at regulated prices. Cable companies do not. Telephone companies must permit their competitors to "collocate" equipment in telephone company premises to make it easier to use that "unbundled" spectrum. Cable companies do not. Telephone companies are almost completely locked-out of the multi-billion dollar (and rapidly expanding) Internet backbone service. Cable companies are not. Telephone companies must offer their retail broadband transmission services to competitors at a federally mandated discount. Cable companies do not. Telephone companies must pay-in to universal service when they provide broadband access. Cable companies do not. And telephone companies have been forced to carve-out their broadband transmission services into a separate affiliate as a condition to gaining regulatory approval of recent mergers. Cable companies have not.[148]

But the disparity between incumbent LECs and cable operators is not limited to the treatment of their broadband services. Incumbent LECs are highly regulated in their provision of telephone exchange and exchange access service. Basic cable service, in contrast, is largely deregulated. Unlike incumbent LECs, cable operators are perfectly free to cross-subsidize their provision of high-speed Internet access service, and they have at their disposal a deregulated monopoly with which to do so.[149]

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[148] Comments of SBC Communications Inc. and BellSouth Corp., GN Docket No. 00-185, Dec. 1, 2000 at 6-7.

[149] *See* ARNHOLD & S. BLEICHROEDER, *supra* at 12 ("We believe [cable] companies can continue to leverage their dominance in cable television to market high-speed Internet services to residential customers.")

This disparity in regulatory treatment has a profound impact in the market.[150] As the Managing Director of Lehman Brothers recently observed: "It's no surprise that cable, which is nearly totally deregulated, has more than twice the penetration of RBOCs" in broadband services. The RBOCs "are forced to jump through a lot of regulatory hoops."[151] Echoing the sentiment, Scott Cleland, Precursor Group Chief Executive Officer, termed the Commission's unbundling requirements "a monster problem of seriously wrong policy and economics … that offers Bells no incentive to deploy new network elements."[152]

These analysts are dead-on. The Commission has long claimed that its policy is to let the market, not regulators, dictate technological winners and losers. But its irrational and skewed approach to the broadband market has precisely the opposite effect. It also runs directly counter to the Commission's espoused (and statutorily mandated) goal of reducing regulations that hinder the deployment of broadband facilities. Eliminating disparate price regulation is only a small part of the solution. The Commission must address other regulatory disparities, as well, if it truly wants to allow market forces to drive the deployment of broadband services.

In any event, no credible argument can be made that SBC enjoys advantages in the market for advanced services used by mass-market customers. "The real issue," as Crandall and Sidak point out, "is whether the very opposite is true: [whether] the advantages enjoyed by cable

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150 For more on the regulatory asymmetry between cable modem providers and DSL providers, see hereinafter Hausman, Sidak & Singer, *Residential Demand for Broadband,* at 151-52.

151 "Wall St. Appears to Favor Broadband Duopoly," COMMUNICATIONS DAILY, July 25, 2001, at 4.

152 *Id. See also* Arnhold & S. Bleichroeder, *supra* at 15 (noting that DSL service "is still not cost-effective for *any* provider" and faulting the Commission for requiring the ILECs to "subsidize their competitors" in the face of stiff competition from cable and satellite.)

operators [are] so great as to render them dominant in the provision of mass market broadband services[.]"[153]

V. SBC DOES NOT POSSESS MARKET POWER IN THE PROVISION OF ADVANCED SERVICES TO LARGER BUSINESS CUSTOMERS.

SBC also does not possess market power in the provision of advanced services to larger business customers, nor does it have any ability rapidly to acquire such market power. SBC is one of literally dozens of companies competing in the larger business advanced services market today. Its competitors include, AT&T, WorldCom, and Sprint, which together, account for about two thirds of all market revenues. In comparison to these firms, SBC is only a minor player in the market. It does not, by a long shot, have the ability to raise prices by restricting its own output.

This is confirmed by an examination of the four sets of criteria the Commission considers in analyzing market power: (1) market share data and trends; (2) demand elasticity; (3) supply elasticity; and (4) miscellaneous factors such as the relative size, resources, and cost structure of competitors. As shown below, application of these criteria confirms that SBC does not possess market power in the provision of advanced services to business customers.

A. Market Share.

SBC is one of many competitors providing advanced services to business customers. SBC began providing Frame Relay, ATM, or SMDS services in the early-to-mid 1990s; it began providing Gigabit Ethernet service within the last year, and still has not deployed this service on a widespread basis in its region. Like any relatively new facilities-based entrant, SBC has

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153 *Crandall/Sidak Declaration,* ¶ 83.

deployed all new facilities to provide these advanced services, including hundreds of packet switches and fiber-optic cables to connect them.

Since it began providing advanced services, SBC has gained only a small share of the market within its region. Crandall and Sidak estimate, for example, that SBC's Frame Relay revenues account for only 11 percent of the Frame Relay revenues in its region, and that SBC's ATM revenues account for only 16.5 percent of the ATM revenues in its region.[154] Because Frame Relay revenues are roughly five times ATM revenues, SBC's share of combined Frame Relay and ATM revenues is approximately 12 percent.[155] Moreover, because ATM and Frame Relay services represent the overwhelming majority of revenues for advanced services provided to larger businesses, SBC's market share for these two services is a reasonable proxy for its share of the overall larger business customer's advanced services market.

SBC's share of the larger business market for advanced services is not only low, but stagnant. During the past three years, it has remained flat, demonstrating that SBC has no ability to gain market power. For example, between 1999 and 2000, SBC's share of combined Frame Relay and ATM revenues within its region remained at roughly 12 percent.[156] In contrast, the big three interexchange carriers – AT&T, WorldCom, and Sprint – have maintained a combined market share of more than 68 percent of all nationwide frame relay revenues and 67 percent of nationwide ATM revenues.[157] Since there is no evidence to suggest that these carriers' market share is different in the SBC region than in other Bell company regions, it is reasonable to

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154 *See Crandall/Sidak Declaration*, ¶¶ 111-112.

155 *See id.,* ¶ 112.

156 *See id.* ¶ 112.

157 *See id.* ¶¶ 110-112.

conclude that they control two thirds of the advanced services market, as well, within SBC's territory.

B. Demand Elasticity.

As explained above, demand elasticity is a measure of the "the propensity of . . . customers to switch carriers or otherwise change the amount of services they purchase . . . in response to relative changes in price and quality."[158] In the usual case of measuring demand elasticity, the Commission is concerned with whether demand elasticity in the relevant market is sufficiently high to constrain the prices of a carrier with a *high* market share. In this case, however, SBC has a very *low* market share in the relevant market. As a result, even if the Commission finds that the larger business advanced services market is demand *in*elastic, it does not mean that SBC will profitably be able to raise its prices to gain market share. To the contrary, such a finding would, if anything, mean that the carriers in this market with already large market shares would be to retain their customers even if they increased their prices. In any event, the evidence here demonstrates the larger business advanced services market is highly demand elastic. As noted above, the Commission has relied on indirect evidence of demand elasticity in a market to demonstrate that providers in that market do not possess market power. In particular, it has found that demand for larger business customers is highly price-elastic given that such customers tend to be very sophisticated and knowledgeable purchasers of telecommunications services.[159]

The purchasers of packet switching services are among the most sophisticated of all telecommunications consumers. They are almost exclusively large businesses, which typically

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158 *AT&T Streamlining Order* at n. 29.

159 *See*, *e.g.*, *id.* ¶ 37 ("business customers are to a large degree demand-elastic and will switch carriers in order to obtain price savings and desired features.")

spend tens of thousands of dollars per year on telecommunications. According to one study, for example, corporate, educational, and government customers account for about 96 percent of Frame Relay revenues, 82 percent of ATM frame relay revenues, and more than 85 percent of SMDS revenues.[160] The remaining revenues are attributable to other telecommunications carriers.[161] Very few small businesses purchase these services.[162]

These large and sophisticated customers shop around heavily before choosing a service provider. Many of them solicit competitive bids from multiple providers through Request For Proposals ("RFPs"). SBC has participated in more than 400 RFPs in the past two years for customers seeking ATM or Frame Relay services. As the Commission has held, the fact that customers "exercise their 'buying power' by soliciting competitive bids before procuring telecommunications services" is evidence that such services are highly demand elastic.[163]

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160 IDC Packet Switching Report, Figure 8, Figure 30, Figure 68.

161 *Id*.

162 Stratecast Partners, *ATM and Frame Relay Market Assessment*, Data/Internet Services Growth Strategies, Volume II, Number 10 (Sept. 2001) ("[f]rame relay has yet to make significant inroads in the small business market, and attempts to move the service down market could prove cost prohibitive for some small businesses").

163 *AT&T Streamlining Order* ¶ 37. Indeed, the existence of large and sophisticated buyers in the market prevents firms from engaging in anticompetitive conduct. These "power buyers"—who not only purchase SBC's advanced services, but also purchase a wide variety of other telecommunications products—have the ability to keep prices down and are able to discipline selling firms. "Empirical studies have shown that the stronger and more concentrated the buyers' side of the market is, the less is any ability of sellers to elevate their prices." *United States v. Archer-Daniels-Midland Co.*, 781 F. Supp. 1400, 1416 (S.D. Iowa 1991). Moreover, "[w]ell established precedent and the . . . Merger Guidelines recognize that the sophistication and bargaining power of buyers play a significant role in assessing the effects of a proposed transaction." R.R. Donnelley & Sons Co.1990 U.S. Dist. LEXIS 11361 *10 (D.D.C. 1990); United States v. Baker Hughes, 908 F.2d 981, 986 (D.C. Cir.1990) (power buyer sophistication likely to promote competition "even in a highly concentrated market."); United States v. Archer-Daniels-Midland Co., 781 F. Supp. 1400, 1416 (S.D. Iowa 1991) (power buyers mitigated against the ability of the merging defendants to raise prices); *United States v. Country Lake Foods, Inc.*, 754 F. Supp. 669 (D. Minn. 1990) (sophisticated customers monitor prices closely and are likely to challenge potential price increases).

In addition, most advanced services customers negotiate long-term contracts that provide significant discounts from carriers' standard rates. For example, in SBC's region (excluding the former Pacific Bell territory[164]), more than 85 percent of all ATM circuits and more than 82 percent of Frame Relay circuits are provided pursuant to long-term contracts, virtually all of which are for three - or five - year periods. The fact that such discounted long-term contracts are the norm, proves not only that customers exercise their buyer-power, but also that there is no real possibility that SBC could rapidly gain market power. Since many, if not most, of its competitors' customers receive service pursuant to long-term contracts, SBC has no ability to compete for those customers at the present time.[165]

C. Supply Elasticity.

As is the case with demand elasticity, the Commission's usual concern in evaluating supply elasticity is whether such elasticity is sufficiently high to constrain the prices of a carrier with a high market share. Because SBC has a low market share in the advanced services market, however, the usual supply elasticity analysis is not necessary here. Given SBC's low market share, it is clear that competitors have more than enough excess capacity in their networks to prevent SBC from engaging in monopoly pricing.[166] In any event, additional evidence confirms the fact that competitors already have significant capacity and can readily add new capacity in a relatively short time period. *First*, as discussed above, there are numerous providers of packet

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[164] SBC excluded California because unique state-specific requirements in that state have the effect of discouraging customers from entering into long-term contracts. In the Pacific Bell territory, approximately 36 percent of ATM circuits and 25 percent of Frame Relay circuits are provided pursuant to long-term contracts.

[165] Most long-term contracts contain termination liabilities for customers that wish to break their contracts, which typically make it uneconomic to do so before the term of the contract has expired.

[166] *See Crandall/Sidak Declaration*, ¶¶ 117-121.

switching services throughout SBC's region with vast packet switching networks. AT&T has a domestic network with over 620 Points of Presence (POP), including multiple POPs in every SBC state.[167] WorldCom and Sprint have similarly extensive networks.[168] And at least 20 other CLECs also provide service in 10 or more cities in SBC's region.[169] All told, CLECs have deployed at least 325 packet switches in SBC's region (and perhaps many times that amount).[170] And they also have deployed extensive fiber networks to connect these packet switches.[171]

Second, competitors have rapidly been deploying new switches, proving that providers in this market can rapidly expand their capacity. For example, from 1997 to 2000, the number of competitive packet switches – including those operated by the big three IXCs – has grown by more than 115 percent, from 151 to more than 325.[172] As the Commission has found, "competitors are actively deploying facilities used to provide advanced services to serve

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[167] AT&T Corp., *High Speed Packet Services, AT&T Frame Relay and ATM Services*, http://www.ipservices.att.com/brochures/atmpdf.

[168] R. Kaplan, IDC, U.S. Packet/Cell-Based Services Market Forecast and Analysis, 2000-2005 at 59 (2001) (700+ POPs for WCOM); MCI WorldCom, Inc., *US Products, Data Networking, Frame Relay*, http://www.worldcom.com/us/products/datanetworking/framerelay/index.phtml (402 Frame Relay POPs); Sprint Corp., *Sprint Business, Dedicated Access, Service and Support*, http://www.sprintbiz.com/esolutions/dedicated_access/service.html (320 POPs).

[169] *See Crandall/Sidak Declaration*, ¶ 118. *See also CLEC Report 2001* at Ch. 13 (Allegiance, Alltel, Birch Telecom, Choice One, Electric Lightwave, Focal Communications, Intermedia, IP Communications, Lightyear, McLeodUSA, Metromedia Fiber Networks, Mpower, New Edge Networks, NuVox, PacWest, TDS Metrocom, Teligent, Time Warner Telecom, TXU Communications, Telepacific, WinStar, XO).

[170] *CLEC Report 2001* at Ch. 13.

[171] In SBC's region, there are at least 34 CLECs with 228 fiber networks in the 61 largest MSAs. *CLEC Report 2001* (13th & 14th eds. 2001); New Paradigm Resources Group, Inc., *CLEC Report 2000* (11th & 12th eds. 2000); New Paradigm Resources Group, Inc., *CLEC Report 1999* (10th ed. 1999).

[172] *Crandall/Sidak Declaration*, ¶ 119. New Paradigm Resources Group, Inc., *CLEC Report 1999*, Ch. 10 (10th ed. 1999); New Paradigm Resources Group, Inc., *CLEC Report 2001*, Ch. 13 (14th ed. 2001).

certain segments of the market - namely, medium and large businesses."[173] Moreover, the Commission has found that "new suppliers of packet services that do not own transmission facilities may readily enter this market on a resale basis by interconnecting their packet switches and other transmission control equipment with trunks leased from facilities-based carriers."[174]

Finally, the enormous expansion of capacity in the larger business advanced services market further demonstrates that competitors in this market have more than enough capacity to constrain SBC's pricing. The ATM market has grown by more than 200 percent since 1998, from $344 million in 1998, to over $1 billion in 2000.[175] The Frame Relay market has grown by more than 60 percent since 1998, from $4 billion in 1998, to $6 billion in 2000.[176] The larger business advanced services market as a whole grew by between $2 billion and $3 billion last year, including by approximately $750 million and $1.1 billion in SBC's region. In other words, the larger business advanced services market last year grew by an amount that is somewhere between 2.5 and 4 times the size of SBC's own packet switching revenues. This demonstrates that competitors are deploying more than enough capacity to take away significant business from SBC.

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173 *UNE Remand Order,* ¶ 306.

174 *Decreased Regulation of Certain Basic Telecommunications Services*, Notice of Proposed Rulemaking, 2 FCC Rcd 645, ¶ 17 (1987).

175 R. Kaplan, IDC, *US Packet/Cell-Based Services Report* at Figure 27 (2001); M. Posey, IDC, *ATM Services Market Share and Assessment, 1999-2004* at Figure 1 (Nov. 1999).

176 R. Kaplan, IDC, *US Packet/Cell-Based Services Report* at Figure 5 (2001); M. Posey, IDC, *Frame Relay Services: Market Share and Assessment*, *1999-2004* at Figure 1 (Nov. 1999).

D. Cost Structure, Size and Resources.

SBC does not enjoy any overall advantages over its competitors with respect to size, resources, financial strength, or cost structure.[177] And it certainly does not have any advantages that are "so great [that they] preclude the effective functioning of a competitive market."[178] To the contrary, SBC operates with significant *dis*advantages in the larger business advanced services market because it is unable to provide packet-switching services on an interLATA basis.

As noted above, many customers that purchase packet switching services seek to connect points that cross LATA boundaries. Indeed, only 12 percent of all Frame Relay and ATM revenues are from the provision of such services on a purely "local" basis.[179] Due to the interLATA restrictions that still exist in nine of the 13 states that SBC serves, however, SBC is largely confined to providing packet switching services on a purely *intra*LATA basis. This means that, even within SBC's region, competitors are capable of providing packet switching services on a more widespread geographic basis than SBC itself and of offering services that SBC cannot provide. Indeed, competitors in the packet switching services market routinely advertise their ability to provide both intraLATA and interLATA packet switching services as giving them a great advantage over incumbent LECs like SBC. For example, WorldCom states that its Metro Frame Relay service "offers an aggressive price position relative to that offered by LECs. LECs can offer local (intraLATA) service, but they cannot cross LATA boundaries or move into other Regional Bell Operating Company territories. WorldCom is in the unique

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177 *See Crandall/Sidak Declaration,* ¶¶ 122-124.

178 *AT&T Streamlining Order,* ¶ 73.

179 *See Crandall/Sidak Declaration*, ¶ 106. Ron Kaplan, IDC, U.S. Packet/Cell-Based Services Market Forecast and Analysis, 2000-2005 (2001).

position to provide both interLATA and intraATA frame relay service by capitalizing on our wholly owned nationwide network."[180] AT&T likewise boasts that its "'any distance' solutions" can meet customers "local, national and global Frame Relay and ATM networking needs."[181] Moreover, analysts have recognized that the inability to offer interLATA packet switching services is the reason that SBC and other Bell companies hold only a very small share of the frame relay market.[182]

The inability to provide interLATA packet switching services is compounded further still by the fact that some of the largest packet switching providers who do provide such services on an interLATA basis – including AT&T – refuse to partner with SBC to offer such services. For example, AT&T has refused to enter into a Network-to-Network Interface agreement under which AT&T would link its interLATA packet switching network to SBC's local intraLATA packet switching networks. Such agreements permit SBC to offer its customers the opportunity

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[180] WorldCom, *Metro Frame Relay Service*, http://www.worldcom.com/us/products/datanetworking/framerelay/metro.

[181] AT&T Corp., *High Speed Packet Services, AT&T Frame Relay and ATM Services*, http://www.ipservices.att.com/brochures/atm.pdf (Recognizing that consumer demand is for broad geographic service, AT&T boasts that "[w]th AT&T, you can leverage our unique 'any distance' solutions to meet your local, national and global Frame Relay and ATM networking needs. With AT&T High Speed Packet Services, you'll have a single service provider."); WorldCom, *Data Networking, Domestic Frame Relay Service* http://www.worldcom.com/us/products/datanetworking/framerelay/domestic/ (WorldCom "provides the most comprehensive frame relay offering through its seamless local-to-global connectivity and industry-leading advanced features.").

[182] Stratecast Partners, *ATM and Frame Relay Market Assessment, Data/Internet services Growth Strategies*, Vol. II, No. 10, at 12 (Sept. 2001) (As one analyst has noted, "[t]hus far, the RBOCs have held a very small share of the frame relay market, primarily because they have only been allowed to offer intra-LATA services."); Frost & Sullivan Telecommunications Industry Analyst Isabelle Gallo. *Frost & Sullivan - New Demands for Capacity Increase Competition Among Packet Data Providers, PR Newswire (October 4, 1999) (*Another analyst notes that "[b]ecause users can be exposed to a wide array of data access technologies, the ability to offer seamless, end-to-end service is becoming critical to winning new customers.").

to obtain packet switching services that, at least in part, are provided by SBC. But without such agreements, SBC is further handicapped in competing for such business.

SBC's main competitors do not suffer from these regulatory handicaps, and also have significant financial strength and resources. AT&T, WorldCom, and Sprint are the nation's three largest long distance carriers, with combined revenues of more than $125 billion – more than two-and-a-half times as large as SBC.[183] In fact, it is these companies' size and strength – as well as their ability to provide packet switching and interLATA services – that have enabled them to become the largest providers of packet switching services.[184] Moreover, there are numerous additional competitors that also are well financed. For example, Time Warner Telecom, XO, and McLeod all have significant financial backing.[185]

Moreover, because SBC is a new entrant into the packet switching market, it enjoys no advantages of scale over its competitors. As the Commission has stated, "Incumbent LECs and

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[183] *Compare* AT&T Corp., Form 10-K (SEC filed Apr. 2, 2001), WorldCom, Inc., Form 10-K405/A (SEC filed Apr. 26, 2001), and Sprint Corp., Form 10-K (SEC filed Mar. 13, 2001) *with* SBC Communications, Inc., Form 10-K (SEC filed Mar. 12, 2001).

[184] WorldCom recently stated that its "[r]evenue growth in these fast-growing services continues to lead the industry." WorldCom Press Release, *WorldCom Group Second Quarter 2001 Revenues Up 12 Percent* (July 26, 2001).

[185] *See*, *e.g.*, Time Warner Telecom Press Release, *Time Warner Telecom Provides Third Quarter Update* (Sept. 25, 2001) (Larissa Herda, chairman, CEO, and president: "Our business continues to be solid, our cash flow remains strong, and our business plan remains fully funded."); *id.* (David Rayner, chief financial officer: "Time Warner Telecom is well financed, even with the deteriorating overall economy."); M. Kastan, et. al., Credit Suisse First Boston: Equity Research, *Telecom Services – CLECs* at 75 (June 5, 2001) ("Total available funding [for XO] (pro forma for the Forstmann investment) therefore was over $2.5 billion at quarter-end, which in combination with the scaled-back business plan, we forecast is enough to fund the company into 1H03."); McLeodUSA Press Release, *McLeodUSA Strengthens Senior Management and Board, Positioning Company for Future Growth* (Aug. 1, 2001) (quoting Ted Forstmann, senior partner, Forstmann Little: "This series of actions is an important step for McLeodUSA. We now have the right capital structure and the right people in the right places to maximize the company's potential…. Our additional investment reflects our confidence that McLeodUSA now has the management, business model and balance sheet to take full advantage of the extraordinary opportunity in the years ahead. With the additional board strength, this company is clearly positioned for the next stage of growth.").

their competitors are both in the early stages of packet switch deployment, and thus face relatively similar utilization rates of their packet switching capacity. . . . It therefore does not appear that incumbent LECs possess significant economies of scale in their packet switches compared to the requesting carriers."[186]

VI. SBC COULD NOT LEVERAGE MARKET POWER FROM TELEPHONE EXCHANGE OR EXCHANGE ACCESS SERVICES INTO THE MASS MARKET OR LARGER BUSINESS MARKET FOR ADVANCED SERVICES.

Because SBC lacks the ability to control price by restricting its output of advanced services, it should be classified as non-dominant in the provision of those services.[187] As noted, however, in the *BOC Classification Order,* the Commission did not merely address whether the BOCs' long-distance affiliates would have market power at the time they began providing long-distance services; after concluding that they would not, it went on to address whether they could quickly thereafter acquire market power.

This was a limited analysis, however. Its purpose was not to address whether or not the BOCs might have any advantages in their provision of long-distance services because of their position in the local market. Its purpose was not even to address whether the BOCs might acquire advantages through discrimination and cross-subsidization. Its sole purpose was to determine whether the BOCs could leverage market power in local markets to such an extent that, "upon entry or soon thereafter," they acquired market power in long-distance services: [188]

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[186] *UNE Remand Order,* ¶ 308.

[187] *See Crandall/Sidak Declaration,* ¶¶ 125-127.

[188] The Commission did not elaborate on the meaning of the phrase "upon entry or soon thereafter." Clearly, though, the word "soon" is critical. Regulating a BOC as dominant merely in anticipation of the possibility that it might acquire market power at some point in the future would be a misapplication of the Commission's rules. Section 61.3(o) of the Commission's rules define a dominant carrier as "a carrier that *possesses* market power." (emphasis added). They do not include within the definition, firms that

> improper allocation of costs by a BOC is of concern because such action may allow a BOC to recover costs from subscribers to its regulated services that were incurred by its interLATA affiliate in providing competitive interLATA services. In addition to the direct harm to regulated ratepayers, this practice can distort price signals in those markets and may, under certain circumstances, give the affiliate an unfair advantage over its competitors.
> … For purposes of determining whether the BOC interLATA affiliates should be classified as dominant, however, we must consider only whether the BOCs could improperly allocate costs to such an extent that it would give the BOC interLATA affiliates, upon entry or soon thereafter, the ability to raise prices by restricting their own output.[189]

The Commission's conclusion that dominant carrier regulation of a service is appropriate *only* if the BOC is likely to *quickly* acquire market power in that service – a conclusion shared by DOJ - is sound. As the Commission noted, "dominant carrier regulations are generally designed to prevent a carrier from raising prices by restricting its output. … [A]pplying dominant carrier regulation to an affiliate in a downstream market would be 'at best a clumsy tool for controlling vertical leveraging of market power by the parent, if the parent can be directly regulated instead.'"[190] Moreover, "regulations associated with dominant carrier classification can … have undesirable effects on competition."[191]

In the present context, the issue thus is whether SBC could, upon entry into the advanced services market or soon thereafter," leverage any market power it has in local market to such an extent, that it acquires market power in advanced services. The answer is that it could not. As shown above, SBC's competitors enjoy significant advantages in both the mass market and

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might at some unspecified point in the future acquire market power. Since a finding of non-dominance can always be changed if circumstances warrant, speculation about future developments is unnecessary.

189 *BOC Classification Order,* ¶ 103.

190 *BOC Classification Order,* ¶ 85.

191 *Id.* ¶ 90.

larger business market for advanced services. In the mass market, they have a more favorable cost structure, far more customers, and they operate completely free from regulation – free even from open access requirements. In the larger business market, they have more extensive networks, more customers, and the ability to provide end-to-end service. In order to acquire market power quickly, SBC would not only have to overcome these advantages in short order – something it has not been able to do - but engage in such rampant leveraging as to establish its own overwhelming advantages. Particularly given that the services in which SBC is ostensibly dominant – local exchange and exchange access services – are highly regulated, the proposition is inconceivable.

Of course, as Crandall and Sidak point out, the FCC need not engage in speculation on this point. The fact that SBC's market share continues to be dwarfed by its competitors in both the mass market and larger business market is *proof* that SBC cannot use its alleged market power in local markets to obtain dominance in advanced services.[192]

In any event, SBC could not, even as a theoretical matter, quickly acquire market power in advanced services through leveraging. In the *BOC Nondominance Order,* the Commission identified three potential avenues for leveraging. SBC shows below that it does not have the ability to acquire market power in advanced services through any of these vehicles.

A. Cross-Subsidization.

In the *BOC Classification Order,* the Commission held that BOC long-distance affiliates could only obtain the ability through cross-subsidization to raise prices by restricting their output "if a BOC's improper allocation enabled a BOC interLATA affiliate to set retail prices at predatory levels (*i.e.,* below the costs incurred to provide those services), drive out its interLATA

[192] *See Crandall/Sidak Declaration,* ¶¶ 86, 109.

competitors, and then raise and sustain retail interLATA prices significantly above competitive levels."[193] Thus the issue here is whether, through, cross-subsidization, SBC could price its advanced services at predatory levels, quickly drive its advanced service competitors from the market, and then keep them (and potential new entrants) out of the market so that it would be able to raise and sustain its prices significantly above competitive levels.

The proposition is nothing short of absurd. For the past two years, SBC has been treated as a non-dominant provider of advanced services, yet it has not come close to acquiring market power in those services. Indeed, SBC's Internet Service Provider's prices for broadband Internet service – far from being predatory – are higher than the prevailing rates for cable modem service, consistent with its higher costs. Nor could SBC effect a predatory pricing strategy on a going forward basis. For one thing, its local and access rates are capped, thereby denying it *any* ability to engage in cross-subsidization, much less the ability to cross-subsidize on such a grand scale as to drive its larger competitors permanently from the market.[194] The Commission and the courts have long recognized the efficacy of price cap regulation in reducing incentives and opportunity for cross-subsidization. As the Commission noted: "[b]ecause price cap regulation severs the direct link between regulated costs and prices, a carrier is not able to recoup misallocated nonregulated costs by raising basic service rates, thus reducing the incentive for the BOCs to

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[193] *BOC Classification Order,* ¶103. *See also United States v. Western Elec. Co., et al.* 900 F.2d 283, 297 (D.C. Cir), *cert. denied,* 498 US 911 (1990) ("cross-subsidization is relevant under VIII(C) insofar as it may be used to price below cost in the competitive market, and thereby unfairly to acquire power and impede competition in that market.")

[194] SBC's special access rates are exempt from price cap regulation only in those metropolitan statistical areas that exhibit sufficient competition to qualify for pricing flexibility. As a result of the *CALLS Order,* its switched access rates are capped at 0.55 cents per minute.

allocate nonregulated costs to regulated services."[195] Indeed, the Commission has recognized that even with sharing, price caps "substantially curtail the economic incentive to engage in cross-subsidization" and that the existing system of "pure" price caps, with no sharing of earnings, effectively eliminates *any* incentive for cost shifting.[196]

Even if price cap regulation were not completely effective in curbing cross-subsidization, cross-subsidization could not possibly occur on such a widespread and sustained basis that SBC could drive and keep its larger competitors and new entrants from the advanced services markets. SBC's competitors in these markets include the likes of AT&T, WorldCom, AOL Time Warner, Sprint, Comcast, Cox, and others. The notion that SBC could quickly drive all of these providers from the market is patently absurd. Moreover, as the Commission recognizes, in the highly unlikely event that it could, the facilities of these firms would remain intact, ready for another firm to buy at distress sale prices, thereby denying SBC any ability to recoup its losses with supracompetitive prices.[197] As aptly explained by AT&T's expert witness, Lawrence Sullivan, in comments submitted by AT&T to the Department of Justice on Ameritech's Customers First Plan:

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[195] *Implementation of the Non-Accounting Safeguards of Section 271 and 272 of the Communications Act, as amended; and Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area,* Notice of Proposed Rulemaking, 11 FCC Rcd 18877 (1996), ¶ 136, *citing Computer III Remand Proceedings: Bell Operating Company Safeguards and Tier 1 Local Exchange Company Safeguards,* 6 FCC Rcd 7571, 7596 (1991). *See also United States v. Western Electric Co., et al.,* 993 F.2d 1572, 1580, *cert. denied,* 114 S. Ct. 487 (1993): "[Price cap regulation] reduces any BOC's ability to shift costs from unregulated to regulated activities, because the increase in costs for the regulated activity does not automatically cause an increase in the legal rate ceiling."

[196] *Policy and Rules Concerning Rates for Dominant Carriers,* 4 FCC Rcd 2873, 2924 (1989); *Price Cap Performance Review for Local Exchange Carriers,* 10 FCC Rcd 8962 (1995), ¶ 187.

[197] "[I]n order to recoup their losses, [predators] must obtain enough market power to set higher than competitive prices, and then must sustain those prices long enough to earn in excess profits what they earlier gave up in below-cost prices." *Matsushita Elec. Indust. Co. v. Zenith Radio Corp.,* 475 U.S. 574, 590-91 (1986).

> Nor is there anything to suggest that any market participant has (or is in a position to) price in a predatory manner – that is to set prices below incremental cost with the expectation of recouping consequent losses through monopoly prices once competitors have been disciplined or dispatched. … [T]he fixed and variable cost relationships culminating from the massive fiber optic investments of all major participants, and the fact that a fiber optic network cannot be withdrawn and turned to other uses, would make it blatantly irrational for any firm to cut prices below incremental costs in the hope of forcing surrender and then recouping losses. Such cuts would have to be massive and remarkably prolonged to drive any otherwise viable competitor out of the market. Moreover, even if such conduct succeeded in sending a competitor to the bankruptcy court it would leave the department firm's fiber optic network intact. That network – available at a lower capital cost – would be brought on line again as soon as, or even before, the predator sought to recoup losses.[198]

In short, no credible claim can be made that SBC can quickly acquire market power in advanced services through cross-subsidization. Indeed, to the extent cross-subsidization is a risk at all, the risk is that SBC will be the victim not the perpetrator of it. The rates for basic cable service are unregulated, even though cable operators enjoy a virtual monopoly in that service, and cable companies are not subject to any cost allocation or accounting rules that would preclude them from financing cable modem price reductions with increases in their rates for basic cable service.

B. Discrimination.

Nor is there any risk that SBC could, through discrimination, quickly acquire market power in advanced services. In the *BOC Classification Order,* the Commission expressed concern that a BOC could "discriminate against unaffiliated interLATA carriers, such as through poorer quality interconnection arrangements or unnecessary delays in satisfying its competitors'

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[198] AT&T's Opposition to Ameritech's Motions for Permanent and Temporary Waivers from the Interexchange Restrictions of the Decree, Civil Action No. 82-0192, Affidavit of Lawrence A. Sullivan, App. C at 14-15, Feb. 15, 1994.

requests to connect to the BOC's network."[199] It concluded nonetheless that a BOC could not discriminate "to such an extent that [its] affiliate would gain the ability to raise prices by restricting its own output upon entry or shortly thereafter."[200]

In the context of advanced services, any risk of discrimination is even more remote. Unlike the long-distance market, the mass market for advanced services is characterized by significant intermodal competition. Indeed, cable operators, which account for 2/3 of the market, and wireless providers, which represent a growing presence, do not use SBC's facilities at all. Thus, there is not even a theoretical possibility that SBC could engage in unlawful discrimination to such an extent as to acquire market power in this market.

Nor is there a risk that SBC could acquire market power in the larger business market. As demonstrated above, although SBC has been providing some advanced services to larger businesses for several years, it has never been able to acquire a significant share of this market. To the contrary, SBC remains a minor player, and the market as a whole is vibrantly competitive. SBC's experience in this market therefore proves beyond any serious dispute that, even if SBC had market power in the provision of local exchange or exchange access services, it has no ability to leverage that power to acquire dominance in the provision of advanced services to larger businesses.

To be sure, SBC does sometimes provide special access connections from end users to competitors' ports, but SBC has no ability to acquire market power in advanced services by discriminating in its provision of those connections. In many cases, providers of advanced services to larger businesses do not use SBC facilities at all to connect to their customers. As of

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199 *BOC Classification Order,* ¶ 111.

200 *Id.*

nine months ago, competitive LECs had deployed 635 local fiber networks in the top 150 metropolitan statistical areas (MSAs) nationally and more than 200,000 local fiber miles.[201] And even when they do use SBC facilities, their extensive packet switching capabilities enable them to minimize local access circuit mileage.[202] Thus, unlike long-distance carriers, who at the time of the *BOC Classification Order* were largely dependent on BOC switched access services to connect to their long-distance customers, SBC's advanced service competitors often do not require extensive reliance on SBC facilities to connect to their customers. For this reason alone, SBC could not through discrimination acquire market power in the provision of advanced services to larger business customers.

But there are other reasons as well. The Communications Act prohibits unjust and unreasonable discrimination, and there is no doubt that if SBC attempted to discriminate in its provision of special access services to its advanced services competitors in order to acquire market power, that would be a clear violation of the Act. There also is no doubt that, even if SBC were foolish enough to attempt to gain market power through discrimination it would be caught. Because discrimination could only succeed in conferring market power if it affected the purchasing decisions of vast numbers of customers, any attempt to acquire market power through discrimination would be bound to fail. The reason is simple: if large numbers of customers are aware that a carrier's service is deficient in one or more respects, so too will be the carrier. If that deficiency is a result of discrimination, the carrier will promptly bring it to the attention of regulators. As the Department of Justice once said: "[D]iscrimination is unlikely to be effective unless it is apparent to customers. But, if it is apparent to customers, it is also likely to be

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201 *See* Joint Petition of BellSouth, SBC, and Verizon for Elimination of Mandatory Unbundling of High-Capacity Loops and Dedicated Transport, CC Docket No. 96-98, April 5, 2001 at 3.

202 *See Crandall/Sidak Declaration*, ¶¶ 106, 126.

apparent to regulators or to competitors that could bring it to the regulators' attention."[203] Indeed, discrimination would be apparent to SBC's competitors long before it was apparent to their customers. SBC's competitors all have aggressive vendor management programs by which they regularly, and with great precision, record virtually every aspect of the access services provided to them, including, for example, circuit failure rates, installation intervals and repair intervals. Any customer-affecting service degradation would surely be detected by these carriers.

In short, SBC could not possibly acquire market power by discriminating against competing providers of advanced services to the mass market or larger businesses. Those providers do not, in many cases, even use SBC's facilities, and to the extent they do, it is inconceivable that they would be unaware of discrimination so rampant that it enabled SBC quickly to acquire market power.[204]

C. Price Squeeze.

Finally, there is no risk that SBC could acquire market power through a price squeeze – that is, by raising its rival's costs. In the *BOC Classification Order,* the Commission found that "the entry of a BOC's affiliate into the provision of in-region, interstate, domestic interLATA services might give the BOC an incentive to raise its price for access services to disadvantage its affiliate's rivals, increase its affiliate's market share, and increase the profits of the BOC

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[203] Report and Recommendations of the United States Concerning the Line of Business Restrictions Imposed on the Bell Operating Companies by the Modification of Final Judgment, filed Feb. 3, 1987 at 96.

[204] It also bears noting that, since SBC is not permitted to carry interLATA traffic originating in nine of its thirteen states, it could not acquire market power in its provision of advanced services even assuming that it could and would engage in rampant undetected discrimination.

overall."[205] The Commission found, however, that "price cap regulation of the BOC's access service sufficiently constrains a BOC's ability to raise access prices to such an extent that the BOC affiliate would gain, upon entry or soon thereafter, the ability to raise prices of interLATA services above competitive levels by restricting its own output of those services."[206]

The risk that SBC could acquire market power in advanced services through a price squeeze is even lower. In the mass market, as noted above, SBC's competitors do not even use SBC access services to serve their customers. They have completely separate networks. Thus, as is the case with discrimination, a price squeeze is not even a theoretical possibility in that market. Likewise in the larger business market, SBC's competitors often do not use SBC local access facilities. To the extent they do, however, they use special access services which are subject to far more competition than were SBC's switched access services at the time of the *BOC Classification Order*. In fact, the special access market has become so competitive that SBC has been exempt from price cap regulation in some areas. In those areas, competitive alternatives deny SBC any ability to effect a price squeeze. In all remaining areas, SBC continues to be subject to price cap regulation in addition to growing competition. There is thus no possibility that SBC could acquire market power in advanced services by raising its rival's costs.

VII. THE COMMISSION SHOULD FORBEAR FROM APPLYING TARIFF REQUIREMENTS TO SBC'S PROVISION OF ADVANCED SERVICES.

Section 10(a) of the 1996 Act requires the Commission to forbear from applying any regulation or any provision of the Communications Act of 1934, as amended, to a telecommunications carrier or service if it determines that: (1) enforcement of such regulation or

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205 *BOC Classification Order,* ¶ 125.

206 *Id.,* ¶¶ 125-126.

provision is not necessary to ensure that the charges, practices, classifications, or regulations by, for, or in connection with that telecommunications carrier or telecommunications service are just and reasonable and are not unjustly or unreasonably discriminatory; (2) enforcement of such regulation or provision is not necessary for the protection of consumers; and (3) forbearance from applying such provision or regulation is in the public interest.[207] In a series of decisions spanning twenty years, the Commission has repeatedly recognized that forbearance from tariff requirements is appropriate for services provided on a non-dominant basis. It has held that the application of section 203 tariff requirements to such services offers no public benefits, while imposing significant social costs. Conversely, it has held that detariffing of competitively provided services promotes competition and offers other significant benefits to consumers

These decisions and the reasoning underlying them apply as much to SBC's provision of advanced services as to other competitively provided services.[208] Because SBC lacks market power in the provision of advanced services, it cannot sustain unreasonable rates or practices. Indeed, the past two years prove that to be the case. Throughout that period and up until quite recently, SBC provided advanced services on a detariffed basis. During this time, the advanced services market experienced explosive growth. Moreover, far from acquiring dominance in the

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[207] Section 10(b) provides that in making the public interest determination under section 10(a)(3), the Commission shall consider whether forbearance "will promote competitive market conditions, including the extent to which such forbearance will enhance competition among providers of telecommunications services." 47 U.S.C. § 160(b). A determination that forbearance will promote competition may be a basis, in itself, for concluding that forbearance would be in the public interest.

[208] AT&T agrees that "[p]ublic utility regulation should be confined to relevant markets in which there is a natural monopoly" and Time Warner AOL agrees that "market forces rather than government mandates are the best vehicle to further development and deployment of competitive broadband services." *See respectively* Reply Comments of AT&T and MediaOne Group, Inc. CS Docket No. 99-251, Sept. 14, 1999, Declaration of Janusz A. Ordover & Robert D. Willig, at 31; Reply of America Online, Inc. and Time Warner, Inc. CS Docket No. 00-30, May 11, 2000, at 17.

market, SBC continued to play an unsuccessful game of catch-up with its more dominant competitors.

The fact that these larger competitors are completely deregulated, while SBC is subject to a smothering array of regulations is indefensible. Chairman Powell has recognized as much. Earlier this year he stated that the Commission's task is to *deregulate* the provision of DSL by incumbent LECs in order to level the playing field between broadband technologies, not to add regulations to the incumbents' existing burdens. The Chairman explained that the Commission must move to "some degree of less regulation" in the broadband market that would be "*not so technology centric."* [209] "We need these things *harmonized,"* he said.[210] "Otherwise, we're penalizing a competitive technology simply because of its legacy."[211]

SBC recognizes that the Commission believes it lacks authority under section 706 to forbear from section 251(c) and 271 requirements until those provisions are fully implemented. But if the section 706 directive that the Commission promote the deployment of advanced services through *inter alia* regulatory forbearance means anything, surely it must apply here, where the Commission clearly has forbearance authority.

The exercise of this authority, in and of itself, would by no means fulfill the Commission's mandate under section 706. If the Commission is to promote the deployment of advanced services as widely as possible, it will have to do far more. Most importantly, it will have to reject its current proposals to extend unbundling requirements to next generation digital loop carrier (NGDLC) technology. If adopted, these proposals would dramatically increase the

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209 "*Cable Bureau Suggests Regulatory Forbearance for New Services,"* COMMUNICATIONS DAILY, Feb. 23, 2001 (emphasis added).

210 *Id.*

211 *Id.*

cost and decrease the revenues available from NGDLC deployment, spelling the difference between profit and loss in many geographic areas. So long as they remain unresolved, incumbent LECs will be hesitant to invest aggressively in widespread DSL deployment.

Nor would the exercise of forbearance authority create complete symmetry in the Commission's regulation of different broadband platforms. In fact, for the most part, it would simply restore the status quo that prevailed at the time Chairman Powell cited the need to achieve greater symmetry through deregulation. It would nevertheless represent an important and essential first step in the right direction. The Commission should take that step as promptly as possible. As shown below, SBC clearly satisfies each of the three prongs of the statutory forbearance test with respect to its provision of advanced services. The Commission therefore must forbear from applying section 203 tariff requirements to those services.

A. The Application of Tariffing Requirements and Other Dominant Carrier Regulations to SBC in its Provision of Advanced Services is Not Necessary to Ensure That SBC's Charges, Practices, Classifications, or Regulations are Just and Reasonable and not Unjustly or Unreasonably Discriminatory.

Throughout the past twenty years, the Commission has consistently recognized that the application of section 203 tariff requirements to services provided on a non-dominant basis is wholly unnecessary. For example, in initiating its *Competitive Carrier* proceeding, in 1979, the Commission observed that tariff requirements are not "of any public benefit where firms lacking market power are involved, for [such firms] have no ability or incentive to charge unlawful rates."[212] Based on that finding, the Commission implemented first, a permissive, and then, a

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[212] *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor*, Further Notice of Proposed Rulemaking, 84 FCC 2d 445 (1980) ¶ 41 (*Competitive Carrier Further Notice*).

mandatory detariffing policy for non-dominant carriers.[213] In each case in which the Commission applied this policy it concluded that market forces, coupled with the section 208 complaint process and the Commission's authority to re-impose tariff requirements if necessary, were sufficient to protect the public interest from unjust and unreasonable rates and practices.[214]

Without disputing the merits of the Commission's policy determination, the District of Columbia Circuit subsequently held that the Commission (at the time) lacked the authority to forbear from applying section 203 tariff requirements.[215] The Commission responded to this decision by implementing the most minimal tariff regime that could be justified under the statute and reiterating its view that tariff filings by non-dominant carriers are wholly unnecessary:

> On the basis of the extensive record developed in response to the Notice, we now reaffirm our policy findings, adopted nearly a decade ago in Competitive Carrier, and conclude that, while tariff regulation is required by the Act, traditional tariff regulation of nondominant carriers is not only unnecessary to ensure just and reasonable rates, but is actually counterproductive since it can

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213 *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities, Authorizations Therefor,* Second Report and Order, 91 FCC 2d 59 (1982) (applying permissive detariffing to resellers of terrestrial common carrier services); Fourth Report and Order, 95 FCC 2d 554 (1983) (applying permissive detariffing to all other resellers and specialized common carriers, including MCI and GTE Sprint); Fifth Report and Order, 98 FCC 2d 1191 1984) (applying permissive detariffing to domestic satellite carriers, miscellaneous common carriers, carriers providing domestic interstate and interexchange digital transmission services, and certain affiliates of exchange carriers offering interstate, interexchange services; Sixth Report and Order, 99 FCC 2d 1020 (1985), (adopting mandatory detariffing for carriers previously subject to permissive detariffing), *vacated MCI Telecommunications Corp. v. FCC,* 765 F.2d 1186 (D.C. Cir. 1985) These decisions are all part of what has been coined the *Competitive Carrier* proceeding.

214 *See e.g., Sixth Report and Order* at 1029 (Throughout this rulemaking, we have determined that enforcement of Sections 201 and 202 objectives of just and reasonable rates could be effectuated for certain carriers without the filing of tariffs and through market forces and the administration of the complaint process.")

215 *AT&T. v. FCC,* Nos. 92-1628, 92-1666, 1993 WL 260778 (D.C. Cir. June 4, 1993) (per curiam), *aff'd, MCI Telecommunications Corp. v. AT&T,* 114 S. Ct. 2223 (1994) (reversing FCC determination that permissive detariffing was within its statutory authority). The court had previously vacated and remanded the Commission's mandatory detariffing policy on the ground that the Commission lacked statutory authority to prohibit common carriers from filing tariffs. *MCI Telecommunications Corp. v. FCC,* 765 F.2d 1186 (D.C. Cir. 1985).

> inhibit price competition, service innovation, entry into the market, and the ability of carriers to respond quickly to market trends.[216]

The Commission has continued to adhere to this view in its application of section 10 of the 1996 Act. For example, in the *IXC Forbearance Order*, the Commission found it was "highly unlikely" that carriers lacking market power could successfully charge rates that violate the Communications Act because an attempt to do so would prompt their customers to switch to different carriers.[217] Moreover, the Commission concluded that it could address illegal carrier conduct through the section 208 complaint process. Similarly, in the *CAP Forbearance Order,* the Commission held "[a]s previously determined by the Commission in the *Competitive Carrier Proceeding* and the *IXC Forbearance Order,* tariffing is not necessary to assure reasonable rates for carriers that lack market power. … [I]f access providers' service offerings violate Section 201 or Section 202 of the Communications Act, we can address any issue of unlawful rates through the exercise of our authority to investigate and adjudicate complaints under Section 208."[218]

This longstanding recognition by the Commission that tariff regulation of non-dominant carriers is unnecessary applies as much to SBC's provision of advanced services as to any other

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[216] *Tariff Filing Requirements for Nondominant Common Carriers*, 8 FCC Rcd 6752 (1993) (*Nondominant Carrier Tariffing Order)* ¶ 2; *vacated on other grounds, Southwestern Bell Corp. v. FCC,* 43 F. 3d 1515 (D.C. Cir. 1995) (finding the range of rates provision violated section 203(a) of the Communications Act). The Commission subsequently eliminated the range of rates provision and reinstated the one-day notice period. *Tariff Filing Requirements for Nondominant Common Carriers ,* 10 FCC Rcd 13653 (1995) (*Nondominant Carrier Tariffing Remand Order)*.

[217] *Policy and Rules Concerning the Interstate, Interexchange Marketplace, Implementation of Section 254(g) of the Communications Act of 1934, as amended,* 11 FCC Rcd 20730 (1996) (*IXC Forbearance Order)*, ¶ 21.

[218] *Hyperion Telecommunications, Inc. Petition Requesting Forbearance, Time Warner Communications Petition for Forbearance; Complete Detariffing for Competitive Access Providers and Competitive Local Exchange Carriers,* 12 FCC Rcd 8596 (1997) (*CAP Forbearance Order*) ¶ ¶ 23, 25.

service provided on a non-dominant basis. Because, as shown herein, SBC lacks market power in the provision of advanced services, it is in no position to sustain unjust and unreasonable rates or engage in unreasonable practices against any class of customer. On the contrary, if it attempts to raise rates to unlawful levels, or to engage in unreasonable practices, it will lose customers and revenues to its competitors. Subscribers and potential subscribers to DSL service will turn, instead, to other broadband platforms, including, but not limited to, cable modem service. Likewise, customers and potential customers of SBC's larger business advanced service offerings will choose AT&T, WorldCom, Sprint and other carriers, who already have considerable advantages in that market. Moreover, in the highly unlikely event that SBC did attempt to charge unjust and unreasonable rates or engage in unreasonable practices, the Commission could address the matter through the section 208 complaint process, including, if warranted, accelerated docket procedures.[219] Therefore, the Commission must conclude that tariff requirements are not necessary to ensure that SBC's charges, practices, classifications, or regulations for advanced services are just and reasonable and not unjustly or unreasonably discriminatory.[220]

B. Dominant Carrier Regulation, Including Tariffing, of SBC's Advanced Services is not Necessary for the Protection of Consumers.

Just as dominant carrier regulation, including tariffing requirements, is not necessary to ensure that the rates and practices of SBC in its provision of advanced service are just and reasonable, neither is tariff regulation necessary to protect consumers. Indeed, for purposes of

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[219] *See Nondominant Carrier Tariffing Remand Order,* ¶ 23 ("because by definition nondominant carriers cannot exercise market power, unlawful tariffs should be rare, and in those few instances in which they may occur, remedial action can be taken after the tariffs become effective.")

[220] Although, by definition, a non-dominant provider of a service cannot sustain unjust and unreasonable rates or practices, the question posed by section 10 is not whether SBC theoretically *could* do so, but whether tariff requirements are *necessary* to prevent such actions.

applying section 10 to tariff requirements, there is little difference between the first and second branch of the section 10 test: if tariff regulation is unnecessary to ensure that the rates, practices, classifications, and regulations of a carrier are just and reasonable and not unreasonably discriminatory, then such regulation *necessarily* is not required to protect consumers. The Commission so found in the *CAP Forbearance Order* and it should so find here.

C. Forbearance From Applying Dominant Carrier Regulation, Including Section 203 Tariff Requirements, to SBC's Provision of Advanced Services is Consistent With the Public Interest.

Because subjecting SBC's advanced services to dominant carrier regulation, including section 203 tariff requirements, is wholly unnecessary, forbearance from applying these requirements to SBC's advanced service is *ipso facto* consistent with the public interest. As the Commission stated in the *IXC Forbearance Order,* "it seems inconceivable that Congress intended section 10 to be interpreted in a manner that allows continue compliance with provisions or regulations that the Commission has determined were no longer necessary in certain contexts."[221] And as Chairman Powell stated in an interview last May:

> if we don't have a clear and demonstrable justification of a rule, then the appropriate role of government is to take the rule away or not interfere in the otherwise proper functioning of a market, rather than leave a rule in for good measure. Over history a lot of rules that were left for good measure … have secondary effects that often harm the welfare of consumers. … I don't think you've got to prove to me that a rule is not necessary. I think I have to prove that it is necessary. And if I can't do that, I don't think that I should intervene.[222]

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[221] *IXC Forbearance Order*, at 20772. Although the Commission in the *IXC Forbearance Order* was speaking of mandatory detariffing, the Commission held in the *CAP Forbearance Order* that the same rationale applied to permissive detariffing. *CAP Forbearance Order* at ¶ 32.

[222] "Powell defends stance on Telecom Competition," COMMUNICATIONS DAILY, May 22, 2001 at 2-3.

But section 203 tariff requirements are not just unnecessary as applied to SBC's advanced services: their application imposes demonstrable social costs and impedes robust competition. The Commission catalogued these costs and the effect of unnecessary tariff requirements on competition in the *IXC Forbearance Order,* the *CAP Forbearance Order,* and other orders. As the Commission explained in those orders, requiring nondominant carriers to file tariffs: (1) removes incentives for rapid price discounting by giving competitors notice of such discounts; (2) reduces or eliminates carriers' ability to make rapid, efficient responses to changes in demand and cost; (3) imposes administrative costs on carriers, which must prepare and file tariffs and Commission staff, which must review them; and (4) limits the ability of customers to obtain service arrangements that are specifically tailored to their needs.[223]

Each and every one of these costs has been recognized since the *Competitive Carrier* proceeding to be an *inherent* social cost of subjecting firms without market power to tariff requirements. Indeed, in its 1979 Notice of Proposed Rulemaking in that proceeding, the Commission noted that "[t]he advance publication of prices and other terms and conditions – in the context of unregulated industries – has been clearly recognized as anticompetitive."[224]

Significantly, the Commission noted that forbearance is appropriate for *any* firm that lacks market power: "Forbearance discretion, of course, must be exercised upon some well-defined bases which can be measured against the overall statutory goals and mandates of the

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223 *IXC Forbearance Order,* ¶ 53, *citing Competitive Carrier Services and Facilities Authorizations Therefor,* Sixth Report and Order, 99 FCC 2d at 1030 and *Implementation of Section 3(n) and 332 of the Communications Act Regulatory Treatment of Mobile Services ,* 9 FCC Rcd 1411, 1479 (1994).

224 *Competitive Carrier Further Notice*, ¶ 87.

Communications Act. The lack of market power is, in our view, clearly a sufficient ground upon which to exercise such discretion."[225]

In recent orders, the Commission has identified still other social costs associated with tariff requirements. For example, in the *IXC Forbearance Order,* the Commission found that tariff filings "may facilitate, rather than deter, price coordination, because under a tariffing regime, all rate and service information is collected in one, central location."[226] In addition, the Commission found, tariffs trigger the application of the filed rate doctrine, thereby effectively denying customers the benefits of state consumer protection and contract laws.[227] In the absence of tariffs, the Commission held, "the legal relationship between service providers and customers will much more closely resemble the legal relationship between service providers and customers in an unregulated environment. Thus, eliminating the filed rate doctrine in this context would serve the public interest by preserving reasonable commercial expectations and protecting consumers."[228]

In short, as the Commission has long recognized, detariffing of services provided by carriers that are non-dominant in the provision of those services offers numerous public benefits, not the least of which is increased competition.[229] Here, no less than in these other contexts, forbearance will eliminate unnecessary cost and expense and promote competition. Accordingly,

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225 *Id.*, ¶ 70.

226 *IXC Forbearance Order,* ¶ 23. *See also id.,* ¶ 61.

227 *Id.* ¶¶ 38, 52, 55.

228 *Id.*, ¶ 55.

229 This latter benefit can itself be a basis for concluding that forbearance would be in the public interest.

it would be in the public interest for the Commission to forbear from applying dominant carrier regulation, including section 203 tariff requirements, to SBC's provision of advanced services.

VIII. CONCLUSION.

As shown above, SBC is non-dominant in its provision of advanced services both for use by mass market customers and by larger businesses. The Commission should thus expeditiously forbear from applying dominant carrier regulation, including tariff requirements, to SBC's advanced services irrespective of whether SBC provides those services through a separate advanced services affiliates. Prompt and favorable action on this Petition will promote competition and consumer welfare and give a much needed boost to the economy as a whole.

Respectfully Submitted,

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October 3, 2001

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)
	)
SBC Petition for Expedited Ruling	)
that it is Non-Dominant in its Provision of	)
Advanced Services and for Forbearance	)
from Dominant Carrier Regulation of	)
Those Services	)

DECLARATION OF ROBERT W. CRANDALL AND J. GREGORY SIDAK

INTRODUCTION

1. In this declaration, we present economic evidence relevant to the non-dominance petition filed by SBC Communications Inc. (SBC) with respect to high-speed packet-switched or advanced services.[1] We find that the market for advanced services consists of two relevant sub-markets: services ultimately used by the mass market ("mass-market broadband services") and those ultimately used by larger businesses ("larger-business broadband services"), and that SBC does not have market power in either of these sub-markets.

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1. For purposes of this analysis, we use the FCC's definition of advanced services, as set forth in the *SBC/Ameritech Merger Order*: "wireline telecommunications services, such as ADSL, IDSL, xDSL, Frame Relay, Cell Relay and VPOP-Dial Access Service (an SBC Frame Relay-based service) that rely on packetized technology and have the capability of supporting transmission speeds of at least 56 kilobits per second in both directions." As did the FCC, we exclude from this definition: (1) data services that are not primarily based on packetized technology, such as ISDN; (2) x.25-based and x.75-based packet technologies; and (3) circuit switched services. *See* Application of Ameritech Corp, Transferor, and SBC Communications Inc., Transferee, for Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Section 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 90, 95 and 101 of the Commission's

QUALIFICATIONS

2. Our professional qualifications for submitting this expert report are as follows.

3. My name is Robert W. Crandall. I am the chairman of Criterion Economics and Senior Fellow in Economic Studies at the Brookings Institution in Washington, a position that I have held since 1978. My areas of economic research are antitrust, telecommunications, the automobile industry, competitiveness, deregulation, environmental policy, industrial organization, industrial policy, mergers, regulation, and the steel industry.

4. I have written widely on telecommunications policy, the economics of broadcasting, and the economics of cable television. I am the author or co-author of five books on communications policy published by the Brookings Institution since 1989.[2] In addition, I have published four other books on regulation and industrial organization with the Brookings Institution.[3] My scholarship has been cited on numerous occasions by the federal judiciary and the Federal Communications Commission (FCC).

5. I have been a consultant on regulatory and antitrust matters to the Antitrust Division of the U.S. Department of Justice, to the Federal Trade Commission, to the Canadian Competition Bureau, and to numerous companies in the telecommunications, cable television,

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Rules, CC Dkt. No. 98-141, 14 F.C.C. Rcd. 14,712 (1999) App. C., Merger Conditions, at 1 ¶ 2 [hereinafter *SBC/Ameritech Merger Order*].

2. ROBERT W. CRANDALL & LEONARD WAVERMAN, WHO PAYS FOR UNIVERSAL SERVICE? WHEN TELEPHONE SUBSIDIES BECOME TRANSPARENT (Brookings Institution 2000); ROBERT W. CRANDALL & LEONARD WAVERMAN, TALK IS CHEAP: THE PROMISE OF REGULATORY REFORM IN NORTH AMERICAN TELECOMMUNICATIONS (Brookings Institution 1996); ROBERT W. CRANDALL & HAROLD FURCHTGOTT-ROTH, CABLE TV: REGULATION OR COMPETITION? (Brookings Institution 1996); ROBERT W. CRANDALL, AFTER THE BREAKUP: U.S. TELECOMMUNICATIONS IN A MORE COMPETITIVE ERA (Brookings Institution 1991); ROBERT W. CRANDALL & KENNETH FLAMM, CHANGING THE RULES: TECHNOLOGICAL CHANGE, INTERNATIONAL COMPETITION, AND REGULATION IN COMMUNICATIONS (Brookings Institution 1989).

3. ROBERT W. CRANDALL & PIETRO S. NIVOLA, THE EXTRA MILE: RETHINKING ENERGY POLICY FOR AUTOMOTIVE TRANSPORTATION (Brookings Institution 1995); ROBERT W. CRANDALL, MANUFACTURING ON THE MOVE (Brookings Institution 1993); ROBERT W. CRANDALL & DONALD F. BARNETT, UP FROM ASHES: THE U.S. MINIMILL STEEL INDUSTRY (Brookings Institution 1986); ROBERT W. CRANDALL, HOWARD K.

broadcasting, newspaper publishing, automobile, and steel industries. I have also been a consultant to the Environmental Protection Agency and the U.S. Department of the Treasury.

6. I was an Assistant Professor and Associate Professor of Economics at the Massachusetts Institute of Technology between 1966 and 1974. I also taught at George Washington University. I have twice served in the federal government. I was Acting Director, Deputy Director, and Assistant Director of the Council on Wage and Price Stability in the Executive Office of the President. In 1974-75, I was an adviser to Commissioner Glen O. Robinson of the FCC.

7. I received an A.B. (1962) from the University of Cincinnati and a Ph.D. in Economics (1968) from Northwestern University.

8. My name is J. Gregory Sidak. I am the F.K. Weyerhaeuser Fellow in Law and Economics at the American Enterprise Institute for Public Policy Research (AEI) and the president and chief executive officer of Criterion Economics. I have been a consultant on regulatory and antitrust matters to the Antitrust Division of the U.S. Department of Justice and the Canadian Competition Bureau and to more than forty companies in the telecommunications, electric power, natural gas, mail and parcel delivery, broadcasting, newspaper publishing, recorded music, and computer software industries in North America, Europe, Asia, and Australia.

9. My academic research concerns regulation of network industries, antitrust policy, the Internet and electronic commerce, intellectual property, and constitutional law issues concerning economic regulation. I have directed AEI's Studies in Telecommunications Deregulation since the project's inception in 1992. From 1993 to 1999, I was also a Senior

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GRUENSPECHT, THEODORE E. KEELER & LESTER B. LAVE, REGULATING THE AUTOMOBILE (Brookings

Lecturer at the Yale School of Management, where I taught a course on telecommunications regulation with Dean Paul W. MacAvoy.

10. I served as Deputy General Counsel of the FCC from 1987 to 1989, and as Senior Counsel and Economist to the Council of Economic Advisers in the Executive Office of the President from 1986 to 1987. As an attorney in private practice, I worked on numerous antitrust cases and federal administrative, legislative, and appellate matters concerning telecommunications and other regulated industries.

11. I am the author or co-author of five books concerning pricing, costing, competition, and investment in network industries.[4] I am the editor or co-editor of three books, including two that are relevant to local competition in telecommunications.[5] I am the author or co-author of more than forty scholarly articles in law reviews or economics journals, including the *American Economic Association Papers and Proceedings, California Law Review*, *Columbia Law Review*, *Journal of Political Economy*, *New York University Law Review*, *Stanford Law Review*, *University of Chicago Law Review*, *Yale Law Journal*, and *Yale Journal on Regulation*, as well as opinion essays in the *Wall Street Journal* and other business periodicals. A number of my scholarly articles are directly relevant to the issues posed by this proceeding.[6]

Institution 1986).

4. J. GREGORY SIDAK & DANIEL F. SPULBER, DEREGULATORY TAKINGS AND THE REGULATORY CONTRACT: THE COMPETITIVE TRANSFORMATION OF NETWORK INDUSTRIES IN THE UNITED STATES (Cambridge University Press 1997); WILLIAM J. BAUMOL & J. GREGORY SIDAK, TOWARD COMPETITION IN LOCAL TELEPHONY (MIT Press & AEI Press 1994); WILLIAM J. BAUMOL & J. GREGORY SIDAK, TRANSMISSION PRICING AND STRANDED COSTS IN THE ELECTRIC POWER INDUSTRY (AEI Press 1995); J. GREGORY SIDAK & DANIEL F. SPULBER, PROTECTING COMPETITION FROM THE POSTAL MONOPOLY (AEI Press 1996); J. GREGORY SIDAK, FOREIGN INVESTMENT IN AMERICAN TELECOMMUNICATIONS (University of Chicago Press 1997).

5. COMPETITION AND REGULATION IN TELECOMMUNICATIONS: EXAMINING GERMANY AND AMERICA (J. Gregory Sidak, Christoph Engel & Günter Knieps, eds., Kluwer Academic Press 2000); IS THE TELECOMMUNICATIONS ACT OF 1996 BROKEN? IF SO, HOW CAN WE FIX IT? (J. Gregory Sidak, ed., AEI Press 1999); GOVERNING THE POSTAL SERVICE (J. Gregory Sidak, ed., AEI Press 1994).

6. *See* Jerry A. Hausman & J. Gregory Sidak, *A Consumer-Welfare Approach to the Mandatory*

12. I have testified before committees of the U.S. Senate and House of Representatives on regulatory and constitutional law matters. My writings have been cited by the Supreme Court of the United States, the lower U.S. federal and state supreme courts, U.S. state and federal regulatory commissions, and the European Commission. In the landmark antitrust decision *United States v. Microsoft Corporation* issued on June 28, 2001, my recent *University of Chicago Law Review* article with Howard A. Shelanski on antitrust remedies in network industries was the first work of legal scholarship that the U.S. Court of Appeals for the District of Columbia Circuit cited as authority in its 125-page opinion.[7]

13. From Stanford University, I received A.B. (1977) and A.M. (1981) degrees in economics and a J.D. (1981). I was a member of the *Stanford Law Review*. Following law school, I served as a law clerk to Circuit Judge Richard A. Posner during his first term on the U.S. Court of Appeals for the Seventh Circuit.

14. We file this declaration in our individual capacities and not on behalf of the Brookings Institution or the American Enterprise Institute, neither of which takes institutional positions with respect to specific legislation, litigation, or regulatory proceedings.

SUMMARY OF CONCLUSIONS

15. We have been asked by SBC to undertake economic analysis to determine whether it would serve the public interest for the FCC to declare SBC's affiliates (hereinafter

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Unbundling of Telecommunications Networks, 109 YALE L.J. 417 (1999); Abbott B. Lipsky, Jr. & J. Gregory Sidak, *Essential Facilities*, 51 STAN. L. REV. 1185 (1999); J. Gregory Sidak & Daniel F. Spulber, *The Tragedy of the Telecommons: Government Pricing of Unbundled Network Elements Under the Telecommunications Act of 1996*, 97 COLUM. L. REV. 1081 (1997); J. Gregory Sidak & Daniel F. Spulber, *Givings, Takings, and the Fallacy of Forward-Looking Costs*, 72 N.Y.U. L. REV. 1068 (1997).

7. United States v. Microsoft Corp., No. 00–5212, slip op. at 11-13 (D.C. Cir. June 28, 2001) (per curiam en banc) (quoting Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1 (2001)).

"SBC") non-dominant in their provision of high-speed packet switched or "advanced" service. We answer that question in this declaration using the analytical framework that the FCC itself has articulated in assessing the regulatory status of other providers of telecommunications services.

16. The remainder of this declaration is organized as follows. In Part I, we review the analytical framework that the FCC has used in previous non-dominance proceedings. FCC rules define a dominant carrier as one that possesses market power (that is, the power to control prices), and a non-dominant carrier as a carrier not found to be dominant.[8] The FCC traditionally has considered four factors in determining whether a firm possesses market power: (1) market share and changes therein, (2) demand elasticity, (3) supply elasticity, and (4) cost and size disparity. In addition to considering these four factors, the FCC also has considered whether a firm classified as dominant that lacks market power in the provision of some services could, through discrimination, cross-subsidization, and/or the effectuation of a price squeeze, quickly acquire market power in those services. The FCC has concluded that if a firm does not now have, and could not quickly gain, the ability profitably to raise the price of a service by restricting its output, it is non-dominant in the provision of that service.

17. In Part II, we explain why SBC is not dominant in the mass-market broadband services market. We begin by defining the relevant market for purposes of our analysis. Using FCC precedent and drawing on generally accepted economic and antitrust principles, we determine that mass-market broadband service constitutes a relevant product market. We conclude that the relevant geographic market is a point-to-point market but that, consistent with FCC precedent, the geographic market should be assumed to be SBC's entire service region.

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8. *See* 47 C.F.R. §§ 61.3(o), 61.3(u).

18. Next, we apply the FCC's analytical framework to the market for mass-market broadband services. These services are used almost exclusively for mass-market access to Internet service providers. With respect to market share, we find that SBC's share of the mass-market broadband services market within its serving area is about 32 percent. This market share is consistent with our finding that DSL providers represent between 28 (according to the FCC) and 38 percent (according to Morgan Stanley Telecom) of the broadband Internet access market nationwide. We find further that in the last quarter of 2000 and the first quarter of 2001, cable modem providers have won more subscribers than have DSL providers. We note that the Commission and the courts have recognized that evidence of low market share, in and of itself, strongly suggests that SBC lacks market power in the provision of DSL services. Because SBC does not represent 100 percent of all DSL revenues, SBC's share of the mass-market broadband services market is presumably smaller.

19. We find further proof that SBC lacks market power in DSL services in our assessment of demand elasticity. We find, in particular, that the own-price elasticity of demand for DSL is very high (between –1.2 and –1.5). We corroborate our demand elasticity analysis with other evidence, including internal SBC data showing extremely high customer-level churn rates and survey data showing that consumers who use broadband services have no strong predisposition to DSL or cable modem service and are likely to choose the platform that offers the best combination of service and price. The FCC has relied heavily on this type of data in its prior analyses of demand elasticity.

20. The evidence on supply elasticity of SBC's mass-market broadband competitors and SBC's relative resources also points toward a finding of non-dominance. SBC competes against numerous mass-market broadband competitors in its region, and SBC's cable modem

competitors alone have sufficient capacity to absorb a significant number (if not virtually all) of SBC's existing DSL subscribers. Moreover, SBC's competitors could readily expand their capacity to absorb additional customers.

20. Finally, SBC does not possess cost or size advantages that confer on it market power in its provision of DSL services. To the contrary, SBC competes against some of the nation's largest companies. Moreover, unlike SBC, these companies are deregulated, not only in their provision of mass-market broadband services, but also in other services (such as multi-channel video programming distribution services) in which they likely have market power. It is not SBC that has advantages over these firms; it is the other way around.

21. Having concluded that SBC does not now have market power in the provision of DSL services, we explain why SBC could not leverage its purported market power in the local exchange market into the mass-market broadband services market. We demonstrate why SBC could not engage in discrimination or predatory pricing against unaffiliated rivals.

22. Next, in Part III, we apply the FCC's analytical framework to larger-business advanced services. We present evidence that advanced services for larger businesses constitute a relevant product market. With respect to market share, we determine that SBC has roughly 12 percent of all packet-switching revenues in its region. With respect to demand elasticity, the type of customer for those services—a large, sophisticated business—suggests that the demand is highly price elastic. Moreover, the competitive bidding process for customers ensures that existing customers are insulated from price increases through the duration of the contract. Next, we demonstrate that SBC's largest competitors—the big three IXCs—have sufficient capacity to absorb any customers who would substitute away from SBC in response to a price increase. Finally, we demonstrate that SBC has no advantage over its rivals in the provision of advanced

services. In fact, the interLATA restrictions imposed on SBC place it at a significant disadvantage compared to its rivals in the provision of larger-business advanced services.

23. Having concluded that SBC does not now have market power in the provision of larger-business advanced services, we explain why SBC could not leverage its purported market power in the local exchange market. In particular, we demonstrate why SBC could not engage in discrimination or predatory pricing against unaffiliated rivals.

I. THE FCC'S FRAMEWORK FOR ANALYZING NON-DOMINANCE

24. The FCC defines a dominant carrier as "a carrier that possesses market power" and a non-dominant carrier as "a carrier not found to be dominant (that is, one that does not possess market power)."[9] In the *Fourth Report* in the *Competitive Carrier* proceeding, the FCC defined market power as the "ability to raise and maintain price above the competitive level without driving away so many customers as to make the increase unprofitable."[10] The Commission affirmed this definition in the *BOC Classification Order*, concluding that "the BOC interLATA affiliates should be classified as dominant carriers in the provision of in-region, interstate, domestic interLATA services only if the affiliates have the ability to raise prices of those services by restricting their own output."[11] Notably, in affirming this definition, the FCC rejected arguments that a BOC affiliate should be deemed dominant if it could obtain unfair

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9. 47 C.F.R. §§ 61.3(o), 61.3(t).

10. Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor, Fourth Report and Order, 95 F.C.C.2d 554, 558 ¶ 7 (1983) (citing William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 945-52 (1981); Valley Liquors, Inc. v. Renfield Importers, Ltd., 678 F.2d 742, 745 (7th Cir. 1982); H&B Equip. Co., Inc. v. International Harvester Co., 577 F.2d 239, 243 (5th Cir. 1978); ALFRED E. KAHN, THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS 65-66 (MIT Press 1988)).

11. Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area and Policy and Rules Concerning the Interstate, Interexchange Marketplace, CC Dkt. No. 96-149, 12 F.C.C. Rcd. 15,756, 15,804 ¶ 85 (1997) [hereinafter *BOC Classification Order*].

advantages over its competitors by virtue of its association with the BOC. The Commission held that dominant carrier status was designed to address anticompetitive pricing by the affiliate, not anticompetitive practices by the BOC and, therefore, should be imposed only when the affiliate would be able to raise its own prices by restricting its own output.[12] The FCC's dominance analysis is grounded in well-accepted antitrust principles of market power.[13]

25. The analytical framework currently used by the FCC to assess market power is based on a framework first articulated in 1991, when the FCC streamlined its regulation of certain AT&T business services.[14] In that order, the FCC identified four primary factors to be used in assessing market power: (1) AT&T's market share and changes therein, (2) the extent to which AT&T's competitors had excess supply capacity, (3) the price elasticity of demand of AT&T's services, and (4) the disparity in size, resources, and cost structures between AT&T and other interexchange carriers (IXCs).[15]

26. The FCC applied this same analytical framework in its 1995 order declaring AT&T non-dominant in its provision of domestic interexchange interstate services.[16] The FCC began its analysis by identifying the relevant product and geographic markets for assessing AT&T's market power. It concluded, based on the market definitions used in the *Competitive Carrier* proceeding and notwithstanding arguments that AT&T maintained market power in discrete services, that all interstate, domestic, interexchange services would be considered a

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12. *Id.* at 15,815 ¶ 103.

13. *See* 2A PHILLIP E. AREEDA, HERBERT HOVENKAMP & JOHN L. SOLOW, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION 83-302 (1995); Landes & Posner, *supra* note 10, at 939-52.

14. Competition in the Interstate Interexchange Marketplace, CC Dkt. No. 90-132, 6 F.C.C. Rcd. 5880 (1991) [hereinafter *AT&T Streamlining Order*].

15. *Id.* at 5882 ¶ 10.

16. Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier, 11 F.C.C. Rcd. 3271 (1995) [hereinafter *AT&T Reclassification Order*].

single product market.[17] It concluded, further, that there was a single national geographic market for such services. Having so defined the relevant product and geographic market, the FCC concluded, based on the four factors identified above, that AT&T lacked market power in this market. The FCC subsequently applied this same four-part non-dominance methodology in both the *AT&T International Non-Dominance Order*[18] and the *COMSAT Non-Dominance Order*.[19]

27. In the *BOC Classification Order*,[20] the FCC revised its approach to defining product and geographic markets and amplified its non-dominance analysis to account for firms that could be dominant in the provision of some, but not all, services. With respect to market definition, the Commission adopted the approach taken in the *1992 Merger Guidelines.*[21] Under that approach, a relevant market encompasses any service or group of services for which there are no close demand substitutes.[22] The Commission noted that, under this approach, there could be multiple product markets for domestic, interstate, interexchange services, and that each route that allows a connection from one location to another would be a separate geographic market.[23] Nevertheless, noting that it would be impracticable and inefficient to recognize and analyze every such market, the FCC concluded that it need only do so if there was credible evidence suggesting that there is or could be a lack of competitive performance with respect to a particular

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17. *Id.* at 3285-86 ¶¶ 20-22.

18. Motion of AT&T Corp. to be Declared Non-Dominant for International Service, 11 F.C.C. Rcd. 17,963, 17,977 ¶ 36 (1996) [hereinafter *AT&T International Non-Dominance Order*].

19. COMSAT Corp., Petition Pursuant to Section 10(c) of the Communications Act of 1934, as amended, for Forbearance from Dominant Carrier Regulation and for Reclassification as a Non-Dominant Carrier, 13 F.C.C. Rcd. 14,083, 14,118-19 ¶ 67 (1998) [hereinafter *COMSAT Non-Dominance Order*].

20. *BOC Classification Order, supra* note 11, at 18,042 ¶ 28.

21. Although under the *Merger Guidelines*, markets are defined primarily based on demand elasticity, the FCC will assume that two services are in the same product market if production substitution among these services is nearly universal—that is, if the suppliers of one service also supply the other service. *See* Application of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communication Corporation to WorldCom, Inc., 13 F.C.C. Rcd. 18,025, 18,041 ¶ 27 & n.66 (1998) (citing *1992 Horizontal Merger Guidelines,* 57 Fed. Reg. at 41,557, § 1.32 n.14) [hereinafter *WorldCom/MCI Order*].

22. *BOC Classification Order, supra* note 11, at 18,042 ¶ 29.

service or group of services or in a particular area.[24] Using this approach, the FCC concluded that all domestic, interstate, interexchange services could continue to be treated as a single product market and that a BOC's in-region and out-of-region territory be treated as separate geographic markets.

28. In 1998, the Commission amplified its non-dominance analysis in the *BOC Classification Order*. The Commission began its analysis by applying the four-part test first articulated in the *AT&T Streamlining Order* and then applied in subsequent non-dominance orders. Because the BOCs were new entrants in the long-distance market, the Commission readily concluded that the BOCs would not have market power in the provision of domestic in-region, interLATA services immediately upon entry into that market. Then, theorizing that this initial lack of market power could simply reflect the BOCs' prior exclusion from the market, the Commission went on to address whether a BOC could leverage market power in local exchange and exchange access services to confer market power on its long-distance affiliate upon entry by the affiliate into the market, or shortly thereafter.

29. As noted, though, the Commission specifically rejected claims that a BOC long-distance affiliate should be deemed dominant solely on the basis of a finding that it could derive advantages in the market through discrimination, cross-subsidization, or other anticompetitive actions by the BOC.[25] While acknowledging that such actions could distort the market and result in a misallocation of societal resources, the Commission found that dominant carrier regulation

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23. *Id.* at 18,042 ¶ 30.

24. *COMSAT Non-Dominance Order*, *supra* note 19, at 14,107 ¶¶ 42-43. *See also SBC/Ameritech Merger Order*, *supra* note 1, at 14,746 ¶ 68 ("As we explained in the *WorldCom/MCI Order*, to define relevant product markets we can identify and aggregate consumers with similar demand patterns."). *See also id.* at 14,747 n.147 ("We can consider, as a whole, groups of point-to-point markets where customers face the same competitive conditions. We therefore treat as a geographic market an area in which all customers in that areas will like face the same competitive alternatives for a product.").

of the affiliate was a poor tool for dealing with those risks.[26] Rather, the Commission found, dominant carrier status would only be appropriate if the advantages conferred by leveraging were so great that, upon entry or soon thereafter, the BOC affiliate would be able to raise prices by restricting its own output.[27]

30. We now apply the FCC's four-part test to the relevant market in this proceeding. As we explain more fully below, we examine two markets for advanced services—a mass-market broadband services market and a larger-business services market. Mass-market broadband customers include residential customers and small businesses. Larger-business advanced service customers include medium-sized and larger businesses that require greater speeds, greater security, multiple connections, or other important features that are not offered by mass-market broadband service providers. Although some customers, such as a medium-sized business with one or two offices, might consider mass-market services as substitutes for larger-business advanced services, we follow the FCC's dichotomy and examine those services separately.[28]

II. SBC IS NON-DOMINANT IN THE MASS-MARKET BROADBAND SERVICES MARKET

31. Mass-market advanced services are provided by cable providers, telephone companies and their affiliates, direct broadcast satellite (DBS), and other firms that provide mass-market consumers packet switched transport at speeds exceeding 56 kilobits per second in

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25. *BOC Classification Order*, *supra* note 11, at 15,873-77 ¶¶ 206-10.
26. *Id*. at 15,877 ¶ 211.
27. *Id*. at 15,834 ¶ 133.
28. For example, in the *WorldCom/MCI Order*, the FCC said: "We distinguish mass market consumers from larger-business consumers because the record indicates that larger-business users often demand advanced long distance features (advanced features), such as frame relay, virtual private networks (VPN), and enhanced 800 services (E800 services), that differ from the services generally demanded by mass market consumers." *WorldCom/MCI Order*, *supra* note 21, at 18,040 ¶ 26.

both directions.[29] In the following sections, we elaborate on the relevant product and geographic markets.

A. Mass-Market Broadband Services Constitute a Relevant Product Market

1. The Product Market

32. Under the 1992 *Merger Guidelines*, used by the FCC to define product markets, a set of services represents a distinct product market if a hypothetical monopoly provider of those services could profitably sustain a nontransitory, nontrivial price increase—that is, if the monopolist's profits after the price increase would exceed the monopolist's profits before the price increase.[30] If the price increase caused enough buyers to shift their purchases to a second product to render the increase unprofitable, then the second product should be considered to be part of the same product market.

33. There is broad consensus that all mass-market broadband services, which are used almost exclusively to access Internet service providers and the Internet, are in the same product market. In fact, the FCC, the Department of Justice,[31] the Federal Trade Commission,[32] and academicians[33] have all previously so concluded.[34] For example, in the *First Advanced Services Report,* the Commission stated in 1999:

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29. *See SBC/Ameritech Merger Order*, *supra* note 1, App. C, Merger Conditions at 1, ¶ 2.

30. 1992 Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, at 20,572 § 1.0 (defining the relevant product market as "a product or group of products such that a hypothetical profit maximizing firm that was the only present and future seller of those products ('monopolist') likely would impose at least a 'small but significant and nontransitory' increase in price.").

31. Competitive Impact Statement at 9, United States v. AT&T Corp., Civil No. 00-CV-1176 (D.D.C. filed May 25, 2000) ("A relevant product market affected by [the AT&T/MediaOne] transaction is the market for aggregation, promotion, and distribution of broadband content and services.").

32. Complaint, AOL, Inc. v. Time Warner, Inc., Docket No. C-3989 (FTC filed Dec. 14, 2000) at ¶ 21 ("The relevant product market in which to assess the effects of the proposed merger is the provision of residential broadband internet access service.").

33. *See* Jerry A. Hausman, J. Gregory Sidak & Hal J. Singer, *Cable Modems and DSL: Broadband Internet Access for Residential Customers*, 91 AM. ECON. ASS'N PAPERS & PROC. 302 (2001) [hereinafter Hausman, Sidak & Singer, *Cable Modems and DSL*]; Jerry A. Hausman, J. Gregory Sidak & Hal J. Singer,

> [W]e see the potential for [the consumer broadband] market to accommodate different technologies such as DSL, cable modems, utility fiber to the home, satellite and terrestrial radio. The fact that different companies are using different technologies to bring broadband to residential consumers and that each existing broadband technology has advantages and disadvantages as a means of delivery to millions of customers opens the possibility of intermodal competition, like that between trucks, trains, and planes in transportation.[35]

Likewise, in the *Fixed Wireless Competition Order,* the Commission found this year that "DSL technologies remain the most significant competitors to Internet over cable."[36] In the *AOL/Time Warner Merger Order,* the Commission concluded that high-speed Internet access services constitute the relevant product market in determining the effects of the proposed merger on the public interest.[37] The Commission also concluded that "[t]he main competitor to cable in the market for residential high-speed Internet services is currently DSL[.]"[38]

Residential Demand for Broadband Telecommunications and Consumer Access to Unaffiliated Internet Content Providers, 18 YALE J. ON REG. 129 (2001) [hereinafter Hausman, Sidak & Singer, *Residential Demand for Broadband*].

34. As explained by Hausman, Sidak, and Singer, broadband access to the Internet represents a discrete product market, separate from the market for narrowband, dial-up Internet access because, among other things, many of the services supported by broadband connections are not available through narrowband connections, and the demand for applications that can be supported only by high-bandwidth connections strongly suggests that the product markets for narrowband and broadband access are distinct. Moreover, empirical research shows that narrowband Internet access prices (including the access charge plus the price of a second telephone line) do not constrain broadband Internet access prices. *See* Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and American Online, Inc., Transferors, to AOL Time Warner Inc., Transferee, CS Dkt. No. 00-30, 16 F.C.C. Rcd. 6547, ¶ 71 (2001) (citing Declaration of Jerry A. Hausman, Attached to the Comments of America Online, Application for Consent to Transfer TCI to AT&T, CS Dkt. No. 98-178, at ¶¶ 4-10; Declaration of Daniel Rubinfeld and J. Gregory Sidak, Attached to the Comments of GTE, Application for Consent to Transfer Control of MediaOne to AT&T, at 8) [hereinafter *AOL/Time Warner Order*]; Hausman, Sidak & Singer, *Cable Modems and* DSL, *supra* note 33; Hausman, Sidak & Singer, *Residential Demand for Broadband, supra* note 33.

35. Inquiry Concerning the Deployment of Advanced Telecommunications Capability*,* Report, 14 FCC Rcd 2398, 2423-24 (1999). In that same report, the FCC noted that "whether a capability is broadband does not depend on the use of any particular technology or the nature of the provider." *Id.* at 2407.

36. Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Dkt. No. 00-132, 16 F.C.C. Rcd. 6005, at ¶ 51 (2001). *See also* Broadband Today*,* FCC Staff Report (Oct. 1999) at 42 ("[A]s deployment of DSL, satellite, and wireless advances, in large part spurred by rapid cable modem deployment, consumers will have alternative platforms to use for high-speed data access[.]").

37. *See AOL/Time Warner Order*, *supra* note 34. Although the Commission suggested that its finding that residential high-speed Internet access services constitute a discrete product market might be limited to the specific context in which the issue had been raised, *id.* at n.202, we are not aware of any basis upon which application of the 1992 *Merger Guidelines* could yield different product market definitions in different

34. The findings of the FCC, the DOJ, the FTC, and academicians that all mass-market broadband Internet access services are in the same product market are correct. Absent a quantitative determination of whether two services are part of the same product market, courts have generally included products in the same market if they are "reasonably interchangeable" in their use.[39]

35. Applying this standard leaves no doubt that all mass-market broadband Internet access services, including, most importantly, DSL and cable modem service, are part of the same product market. First, from a functional standpoint the services are substantially similar. The predominant use of such services by the mass market is to obtain high-speed access to Internet service providers and the Internet. Broadband services permit consumers to navigate the web on a far more efficient basis than dial-up Internet access, and they provide consumers with access to a host of features that require high bandwidth, including real-time video programming, on-demand video, customized music and video libraries, real-time radio programming, interactive multi-player gaming, and high-speed telecommuting. According to surveys conducted by ZDNet and the Yankee Group, the high bandwidth common to all broadband services is clearly the principal determinant of consumer decisions to purchase broadband service.[40] Other common

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proceedings. In any event, the Commission has never, formally or informally, deviated from the view that broadband Internet access services constitute a discrete product market. To the contrary, the Commission has in numerous other contexts treated the broadband Internet access market as a discrete product market. See note 55, *infra* (presenting market shares for "high-speed services for Internet access.").

38. *Id.* at ¶ 65.

39. Brown Shoe Co. v. United States*,* 370 US 294, 325 (1962); ABA ANTITRUST SECTION, ANTITRUST LAW DEVELOPMENTS 200 (3d ed. 1992).

40. *See, e.g., ZDNet Study Suggests Broadband Adoption Will Be Drive by Increasing Demand for Access to Music, Video, and Games,* PR NEWSWIRE, June 29, 1999 (63 percent of respondents were interested in broadband due to desire to download more audio, video, or game files, while 54 percent were motivated by a desire to enjoy streaming audio or video); JP MORGAN H&Q/MCKINSEY & COMPANY, BROADBAND 2001: A COMPREHENSIVE ANALYSIS OF DEMAND, SUPPLY, ECONOMICS, AND INDUSTRY DYNAMICS IN THE U.S. BROADBAND MARKET, Apr. 2, 2001, at 29 [hereinafter JP MORGAN BROADBAND] (finding that, for most broadband users, the most appealing aspect of the service is its speed); YANKEE GROUP,

attributes of mass-market broadband services include the fact that they are "always on" and do not require consumers to log on each time they want to use the Internet. In addition, unlike dial-up Internet access, broadband services do not use the voice frequency of the subscriber's telephone line, thus enabling a subscriber to access the Internet and use his telephone at the same time, without having to purchase a second telephone line. These qualities, as well, are invariably cited by broadband subscribers as significant attributes of the service.[41]

36. Second, consumers view these services as substitutes for each other. A recent Harris Interactive Consumer TechPoll of more than 69,000 Internet users found that "subscribers saw little difference between DSL and cable modem services."[42] Echoing this conclusion, a survey jointly conducted by the Yankee Group and the Satellite Broadcasting and Communications Association found that nearly half of all of those surveyed who were interested in a broadband connection had no preference as between DSL, cable, or satellite service.[43]

37. Third, providers of mass-market broadband services perceive themselves as competitors. For example, AT&T promotes its cable modem service to both business and residential customers as a competitor to DSL.[44] According to Comcast's 2001 Form 10-K filing with the Securities and Exchange Commission, Comcast considers DSL to be its most important competitor in the provision of broadband services:

RESIDENTIAL BROADBAND: CABLE MODEMS AND DSL REACH CRITICAL MASS, Mar. 2001, at 9 [hereinafter YANKEE GROUP BROADBAND] (most commonly cited reason by consumers for interest in broadband service was their desire for a significantly faster connection to the Internet; next most common reason was being able to use their telephone and access the Internet at the same time).

41. JP MORGAN BROADBAND, *supra* 40; United States General Accounting Office, *Characteristics and Choices of Internet Users,* Feb. 2001, p. 25; YANKEE GROUP BROADBAND, *supra* note 40, at 9.

42. *Cable or DSL? Consumers See Little Difference,* Dec. 1, 2000, at www.Cyberatlas.com.

43. YANKEE GROUP BROADBAND, *supra* note 40, at 10.

44. Applications for Consent to Transfer of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Transferor, to AT&T Corp., Transferee, CC Dkt. No. 99-251, AT&T Reply Comments at 80 (filed Sept. 17, 1999) (calling DSL services "the most obvious competitors of broadband cable modem services").

> Numerous companies, including telephone companies, have introduced DSL service and certain telephone companies are seeking to provide high-speed broadband services without regard to present service boundaries and other regulatory restrictions. We are unable to predict the likelihood of success of competing online services offered by our competitors or what impact these competitive ventures may have on our business and operations.[45]

Similarly, DSL providers mentioned cable modem service as a competitor in the market for broadband services.[46]

38. Fourth, the different broadband platforms that serve consumers are generally priced similarly enough to support their inclusion in the same product market. Indeed, the prices for cable modem access and DSL access appear to move together. According to ARS Broadband Provider Tracking Service, AT&T charged $39.95 per month for cable modem service from August 2000 through May 2001, raised its prices to $45.95 in June 2001, and raised its prices once in July 2001 to $50.61.[47] In a similar fashion, Verizon charged its DSL customers $39.95 per month from July 2000 through April 2001, and raised its monthly price to $49.95 in May 2001.[48] DirecTV raised the monthly price of its DSL offering in March 2001 from $43.28 to $49.95.[49] The FCC has recognized the similarity in pricing between broadband alternatives.[50]

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45. COMCAST CABLE COMMUNICATIONS INC., 2000 SEC FORM 10-K, Mar. 16, 2001, at 6.

46. *See, e.g.,* VERIZON COMMUNICATIONS INC., 2000 SEC FORM 10-K405, Mar. 23, 2001, at 12; BELLSOUTH CORP., 2001 SEC FORM 10-K, Mar. 2, 2001, at 20.

47. Data supplied to SBC Communications by ARS Broadband Provider Tracking Service, Sept. 2001.

48. *Id*.

49. *Id*.

50. *See*, *e.g.*, Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Dkt. No. 00-132, 16 F.C.C. Rcd. 6005, ¶ 53 (2001) ("[B]oth cable Internet access providers and DSL operators offer services at around the same price[.]"). In a similar fashion, Hausman, Sidak and Singer analyzed price movements of access technologies to show the broadband services were distinct from narrowband services. *See* Hausman, Sidak & Singer, *Cable Modems and DSL*, *supra* note 33.

39. For all of these reasons, it is clear that mass-market broadband services are "reasonably interchangeable" in use and thus part of a discrete and relevant product market. Indeed, we are unaware of any credible argument to the contrary.[51]

40. Although some have argued that broadband services do not comprise a complete product market,[52] their position has been that the market is *broader* in scope, not that individual broadband services comprise discrete product markets. More specifically, the only debate of which we are aware regarding product market definitions for mass-market broadband Internet access services has centered around the question of whether such services are part of a larger market that also includes narrowband Internet access services.

41. Whether one should include narrowband Internet services in the market is largely academic for present purposes. As we understand SBC's petition, SBC will not ask the Commission to forbear from regulating its narrowband services. Even assuming, therefore, as some have claimed, that narrowband and broadband Internet access services are part of the same

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51. The fact that DSL or cable modem transport may not be sold directly to the mass market by the transport providers, but rather by ISPs who bundle the transport with their Internet access, is irrelevant to this analysis of the product market. If one can demonstrate that a vertically integrated DSL provider cannot exercise market power in the end-user market, then certainly a vertically disintegrated DSL provider could not exercise market power in the end-user market, or, for that matter, at any stage of the production process. According to Marshall's rules, the elasticity of demand for inputs is directly related to the elasticity of demand for the end product. Applied here, the pricing of transport is constrained by the price-elasticity of demand for DSL service. *See* Jerry A. Hausman & J. Gregory Sidak, *A Consumer-Welfare Approach to the Mandatory Unbundling of Telecommunications Networks*, 109 YALE L. J. 417, 475-77 (1999). For an elaborate discussion of Marshall's rules, see P.R.G. LAYARD & A.A. WALTERS, MICROECONOMIC THEORY 259 (McGraw-Hill 1978).

52. *See, e.g.*, Applications for Consent to Transfer of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Transferor, to AT&T Corp., Transferee, CC Docket No. 99-251, AT&T Reply Comments at 69, 71-75 (arguing that high-speed and narrowband Internet access services constitute part of the same market); *AOL/Time Warner Order*, *supra* note 34, ¶¶ 68-74 (noting that MediaOne, AT&T, Time Warner, and AOL have argued, in various proceedings, that narrowband and broadband Internet access services constitute a single product market). Ironically, in the *AT&T-TCI* merger proceeding, when it fit AOL's purposes to do so, AOL argued that broadband access services constituted a separate product market. *See* Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor, to AT&T Corp., Transferee, CS Dkt. No. 98-178, Comments of America Online at 16.

product market, consumers would necessarily have a regulated substitute service (narrowband service) available to them even after the detariffing of SBC's broadband service. That regulated alternative would ensure that a substitute service is available at just and reasonable terms, and it would further constrain SBC's ability profitably to raise DSL prices to supracompetitive levels. Any such increase would precipitate a migration of customers to alternative broadband Internet access platforms, and it would precipitate a further migration of customers to narrowband access.

2. The Geographic Market

42. Like long-distance voice traffic, a broadband connection to an Internet service provider "at its most fundamental level, involves a customer making a connection from one specific location to another specific location."[53] As with a long-distance voice call, customers do not view broadband connections originating in different locations to be close substitutes for each other.[54] In this respect, the relevant geographic market for mass-market broadband services is all possible routes that allow for a connection from one particular location to another location (that is, a point-to-point market).[55]

43. But, as the Commission has properly recognized, assessing market power in each individual point-to-point market would be administratively impractical and unnecessary.[56] There is no credible evidence that there is any particular point-to-point market or group of point-to-point markets in which SBC could exercise market power in the provision of DSL services. There are numerous providers of competitive broadband service. There are more than one dozen

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53. *See BOC Classification Order*, *supra* note 11, at 15,792-93 ¶ 64.
54. *Id.*
55. *Id.*
56. *Id*. at 15,794 ¶ 67 ("Unless there is credible evidence suggesting that there is or could be a lack of competition in a particular point-to-point market or group of point-to-point markets, and there is a showing that geographic rate averaging will not sufficiently mitigate the exercise of market power, we will refrain from employing the more burdensome approach of analyzing separate data from each point-to-point market.").

providers of cable modem service, including, among others, AOL Time Warner, AT&T Broadband, Comcast, and Cox Communications.[57] Moreover, all of the leading providers of cable modem service in SBC's region have upgraded the vast majority of their cable plant so that it is broadband-capable. Indeed, as of June 2001, AOL/Time Warner had upgraded nearly 100 percent of its plant and AT&T had upgraded at least 75 percent.[58] Comcast will have upgraded at least 80 percent of its plant by the end of 2001, and Charter Communications as much as 90 percent.[59] Thus, it is likely that a very large percentage of households in SBC's territory have access to cable modem service.

44. That conclusion is supported by two recent analyst reports. One, issued by the Yankee Group, found that, as of year-end 2001, two thirds of all U.S. households will have access to cable modem service and that, by year-end 2002, 77 percent of U.S. households would have access to cable modem service.[60] Another report, issued jointly by JP Morgan and McKinsey & Co., found even higher addressability: 74 percent of U.S. households at the end of 2000, and an estimated 82 percent at the end of 2001.[61] Finally, the National Cable and

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57. According to the FCC's August 9, 2001 report, there at least five providers of cable modem service in each SBC state for which data were released. There were ten providers of cable modem service in California. *See High-Speed Services for Internet Access: Subscribership as of December 31, 2000,* Industry Analysis Division, Common Carrier Bureau, FCC, August 2001, at Table 5 [hereinafter *CCB Subscribership Analysis*].

58. *See* JP MORGAN BROADBAND*, supra* note 40, tbl. 6.

59. MediaWeek, *Smooth Operators Upgrading Cable's Big Seven*, June 14, 2001, downloaded from http://dailynews.yahoo.com/h/bpimw/20010614/ad/_b_hl_smooth_operators_upgrading_cable_s_big_seven_hl_b_1.html on June 20, 2001. JP Morgan and McKinsey provide the following data on cable plant upgrades for the year 2000: AT&T 75 percent; AOL Time Warner 100 percent; Comcast 70 percent; Charter 55 percent; Cox 74 percent; Adelphia 60 percent; and Cablevision 73 percent. For the year 2001 (estimated): AT&T 77 percent; AOL Time Warner 100 percent; Comcast 86 percent; Charter 69 percent; Cox 84 percent; Adelphia 76 percent; Cablevision 95 percent. *See* JP MORGAN BROADBAND*, supra* note 40, tbl. 6.

All of these data on plant upgrades are national in scope. Regional data are unavailable, but there is no reason to believe that the data would be significantly different for SBC's region. If anything, given SBC's aggressive DSL deployment plans, one would expect the pace of cable plant upgrades to be higher than the national average in the SBC region.

60. YANKEE GROUP BROADBAND, *supra* note 40, at 4.

61. JP MORGAN BROADBAND, *supra* note 40, at Table 6.

Television Association reported in September 2001 that 83 percent of all U.S. households would be upgraded for cable modem service by the end of 2001.[62]

45. Notably, SBC is currently able to offer DSL service to only 50 percent of its customers.[63] Nationally, fewer than half of all U.S. households have access to DSL service.[64] Given that cable penetration in SBC's territory is likely to be at least as high as the national average, there are likely to be very few areas in which SBC offers DSL service but no cable provider offers cable modem service.[65]

46. Even if there are a few such non-overlapping areas, there are alternative broadband platforms in those (and other) areas that compete with SBC's DSL service. For example, despite the recent difficulties encountered by many CLECs, they collectively accounted for about 16 percent of the DSL market in December 2000.[66] They can lease unbundled loops or the high-frequency portion of a loop anywhere in SBC's territory to provide DSL service. Satellite and fixed wireless broadband services also provide consumers with a broadband alternative. Although wireless technologies still account for a relatively small share of the broadband Internet access market, they are ubiquitously available and growing rapidly. For example, the Strategis Group predicts that the number of U.S. satellite subscribers will grow to more than four million by 2005.[67] It is reasonable to believe that satellite services could reach those (rare) areas that are served by DSL but not served by cable modems. To be sure, upload

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62. Downloaded from National Cable Television Association web site on Sept. 25, 2001 at http://www.ncta.com/industry_overview/indStat.cfm?indOverviewID=2.

63. *See* SBC Communications, Inc., Strong Growth in Data, Wireless and Long Distance Highlights SBC's First-Quarter Results, Press Release, Apr. 23, 2001, *available at* http://www.sbc.com/Investor/Financial/Earning_Info/docs/1Q_IB_FINAL.pdf.

64. JP MORGAN BROADBAND, *supra* note 40, at 43, Chart 25.

65. *Id.* at 43, Chart 25 (as of first quarter of 2000, only 10 percent of residential households were addressable by DSL but not cable modem service).

66. ILECs account for about 84 percent of the DSL market nationwide. *See* COMM. DAILY, Aug. 14, 200,1 at 6 (discussing Telechoice study).

speeds for satellite broadband service are slow. But as Professors Janusz Ordover and Robert Willig have testified on behalf of AT&T, such concerns are "irrelevant to the vast majority of users who, if they worry about speed at all, are primarily interested in fast download times and do not send significant amounts of information."[68]

47. Irrespective of whether satellite services experience the explosive growth that some predict, it is reasonable to conclude that providers of those services will fill a market niche, focusing their competitive efforts in any areas in which cable modem and/or DSL services are not available. Indeed, satellite broadband providers are likely to be most successful in areas in which cable service is not available, because it is in those areas that consumers are likely to use DBS service for video, and consumers who already use satellite service are likely to be the most receptive to satellite-based Internet access.

48. For customers who cannot obtain cable modem access, fixed-wireless service is another option. Frost & Sullivan project that the number of fixed-wireless broad subscribers will grow from 79,000 at the end of 2000 to over 400,000 at the end of 2001 and to almost one million at the end of 2002.[69] Even if these predictions prove wrong, fixed-wireless services, at a minimum, can be expected to fill any niche in which competition between DSL and cable modem services is less vigorous.

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67. Dan Miller, *Who You Gonna Call for Broadband?*, INDUS. STANDARD, Apr. 30, 2001.

68. Declaration of Janusz A. Ordover and Robert Willig, attached to AT&T and MediaOne Reply in Applications for Consent to the Transfer of Control of Licenses, MediaOne Group, Inc., Transferor, to AT&T Corporation, Transferee, CC Dkt. No. 99-251, Sept. 17, 1999.

69. FROST & SULLIVAN, NORTH AMERICA BROADBAND WIRELESS ACCESS SERVICES MARKET 2001, at 1-3.

B. Application of the FCC's Four-Part Test to the Mass-Market Broadband Services Market

49. With respect to each of the Commission's criteria, SBC is non-dominant in the mass-market broadband services. In the following section, we find:

50. *First*, SBC's competitors have captured more than 65 percent of the market for mass-market broadband services. Moreover, they are exhibiting faster growth than is SBC.

51. *Second*, customers for DSL services have price-elastic demand. Econometric analysis and customer-level churn data suggest that SBC could not profitably raise prices.

52. *Third,* SBC's competitors have more than enough excess capacity to constrain SBC's pricing determinations. In fact, cable operators alone could likely absorb more than a sufficient number of DSL subscribers to constrain SBC's pricing of DSL transport. Moreover, the pace at which they are upgrading their networks and adding customers demonstrates that they could readily add capacity.

53. *Fourth*, SBC does not have advantages over its competitors in terms of relative size, resources, or cost structure, certainly not advantages that could confer monopoly power. Rather, it appears that SBC's competitors have significant cost and other advantages, including a much more favorable regulatory framework in which to operate.

1. Market Share

54. When the FCC declared AT&T to be non-dominant in "interstate, domestic, interexchange telecommunications services" in late 1995, AT&T's market share was estimated to be 60 percent.[70] Likewise, AT&T's overall share of the international long-distance services market was estimated to be about 60 percent at the time that the FCC declared AT&T to be non-dominant in those services, and in a number of countries, AT&T's market share was significantly

higher. Its average market share (weighted by revenues) in 76 select countries was 74 percent, and it faced no competition at all in four countries.[71] In contrast, SBC's share of the mass-market broadband services market in its region is about 30 percent—roughly *half* of AT&T's share of the IXC market when the FCC declared AT&T to be non-dominant.[72]

55. We base this estimate of SBC's market share on numerous sources. First, the Commission's August 9, 2001 report, *High-Speed Services for Internet Access*, estimates the market share of different broadband platforms on a state-by-state basis.[73] Data were available for all but four of the SBC states—Oklahoma, Kansas, Arkansas, and Nevada. The results for the remaining nine states in the SBC region appear in Table 1.

TABLE 1: SBC MARKET SHARES BY STATE

State	Cable Lines	ADSL Lines	Other	ADSL Share*	SBC Share**
California	476,544	622,894	287,187	45%	43%
Connecticut	78,234	22,348	11,210	20%	19%
Illinois	126,490	48,278	67,471	20%	19%
Indiana	37,052	6,442	17,000	11%	10%
Kansas	48,541	14,281	5921	21%	20%
Michigan	130,296	25,482	42,452	13%	12%
Missouri	42,255	38,759	19,389	39%	37%
Ohio	121,196	55,046	47,603	25%	24%
Texas	227,070	158,513	136,955	30%	29%
Total	1,287,678	992,043	635,188	34%	32%

Source: *See High-Speed Services for Internet Access: Subscribership as of December 31, 2000,* Industry Analysis Division, Common Carrier Bureau, FCC, Aug. 2001, at Table 6.

Notes: * Because the overwhelming majority of SBC's high-speed Internet access lines are ADSL, we use the ADSL deployment data as a proxy for SBC's high speed Internet access lines in service.

** ILECs account for about 84 percent of the DSL market nationwide. *See* COMM. DAILY, Aug. 14, 2001, at 6 (discussing Telechoice study); IDC, U.S. DSL MARKET SHARES BY VENDOR, Aug. 2001 (Covad, Rhythms, and Broadwing account for 13.4 percent of all DSL lines; Covad accounts for about 10 percent of DSL lines). Although Covad reports that half of its customers are residential, we assume, to be conservative, that only one-third of DLEC DSL lines are ADSL. Therefore, we estimated SBC's market share by multiplying the total ADSL market share in its region by 95 percent.

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70. *AT&T Reclassification Order*, *supra* note 16, at 3305 ¶ 62 & n.173.

71. *AT&T International Non-Dominance Order*, *supra* note 18, at 17,978 ¶ 40.

72. Telecommunications Reports International, *TR's Online Census: Free's Not Always Easy*, May 2001 [hereinafter *TR Census*].

73. *CCB Subscribership Analysis*, *supra* note 57.

As Table 1 shows, SBC's share of the broadband Internet access market ranged from 10 percent in Indiana to 43 percent in California. The FCC data are largely consistent with data in analyst reports. For example, a survey conducted by Forrester Research in the fourth quarter of 2000 estimated that DSL's share of the broadband Internet access market in SBC's states was 32.4 percent.[74]

56. We also examined DSL's share of the mass-market broadband services market nationwide. According to the FCC's broadband subscribership report released in August 2001, about 28 percent of all high-speed Internet access lines in service as of December 2000 were asymmetric DSL (ADSL) lines.[75] There were fewer than 2 million ADSL lines, but more than 3.5 million high-speed coaxial cable lines. These data are consistent with national survey data from Telecommunications Reports International, which show DSL's share of the mass-market broadband services market to be 32.4 percent at the end of the first quarter of 2001.[76] In addition, numerous analyst reports show cable modem service to be far outpacing DSL service.[77]

57. These market share data indicate that SBC is non-dominant in the provision of mass-market broadband services. Although the Commission has correctly recognized that, in certain circumstances, market share data are not necessarily a reliable indicator of market power, it did so in the context of a company (AT&T) that had a large, but declining, market share in an industry characterized by high demand and supply elasticities. In that context, the FCC properly recognized that market share is not necessarily indicative of market power.

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74. FORRESTER RESEARCH, CONSUMER TECHNOLOGY MARKET FOCUS SURVEY, at 1 (2000) [hereinafter FORRESTER STUDY].

75. *See CCB Subscribership Analysis*, *supra* note 57, at Table 1.

76. *TR Census*, *supra* note 72.

77. *See, e.g.,* YANKEE GROUP BROADBAND, *supra* note 40, at 1 (DSL share of 31 percent); MORGAN STANLEY DEAN WITTER, TELECOM TREND TRACKER, Aug. 17, 2001 [hereinafter MORGAN STANLEY TELECOM] (DSL share of 38 percent).

58. Although a large market share does not necessarily indicate market power, a low market share usually indicates a lack of market power. That is because firms with low market shares cannot usually affect the price of a product by restricting their output.[78] Courts will almost never conclude that a firm possesses market power if its market share is less than 40 percent.[79]

59. To be sure, the Commission did not give dispositive weight to the zero market share of the BOC long-distance affiliates in the *BOC Classification Order*. Rather, while recognizing that this market share "suggests that the affiliate will not initially be able to raise prices by restricting output," the Commission deemed it necessary to address whether the BOC might quickly acquire a high market share after entry into the market.[80] That decision, however, was made in the context of a BOC entering a new market for the first time. In the present case, in contrast, SBC has been actively competing in the broadband Internet access market for two years. The Commission need not speculate about whether SBC, upon entry or soon thereafter, can acquire market power in broadband services. In two years of making broadband deployment a top company priority,[81] SBC has not come close to doing so.

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78. *See BOC Classification Order*, *supra* note 11, at 15,802-03 ¶ 83 (the ability to raise prices by restricting one's own output "usually requires a large market share."); *id.* at 96 ("the fact that each BOC interLATA affiliate initially will have zero market share in the provision of in-region, interstate, domestic, interLATA services suggests that the affiliate will not initially be able to raise price by restricting its output").

79. ABA ANTITRUST SECTION, ANTITRUST LAW DEVELOPMENTS 213-14 (3d ed. 1992); United States v. Aluminum Co. of America, 148 F.2d 416, 424 (2d Cir. 1945) ("it is doubtful whether a 60 percent market share would constitute a monopoly, and certainly 33 percent is not"); Landes & Posner, *supra* note 10, at 938, 959.

80. *BOC Classification Order*, *supra* note 11, at 15,811-12 ¶ 97.

81. *See* SBC Launches $6 Billion Initiative to Transform it into America's Largest Single Broadband Provider, Press Release, Oct. 18, 1999, *available at* http://webcast.sbc.com/media/news/release.doc (quoting Edward E. Whitacre, Jr., chairman and chief executive officer of SBC: "We see a rapidly changing marketplace where traditional dialtone is still a staple service, but where millions of our customers will demand the convenience, productivity, availability and reliability of our broadband service—service which we call '*e*-tone.' With Project Pronto, SBC will lead the nation in speeding the widespread availability and meeting the demand for broadband and emerging broadband-powered services.").

60. Indeed, far from acquiring market power, telephone companies have *lost* ground to their cable competitors in the broadband Internet access market. According to the FCC's August 9, 2001 report, *High Speed Services for Internet Access*, during the year 2000, cable companies added about 2.2 million cable modem lines, while telephone companies added about 1.6 million DSL lines. A Yankee Group report, issued in March 2001, shows an even larger cable modem advantage. According to that report, cable operators added 2.6 million cable modem lines in 2000, while DSL providers added only 1.3 million lines.[82]

61. Moreover, during 2001, cable's advantage has been accelerating. According to Morgan Stanley Dean Witter, cable operators won 64 percent of new broadband subscribers in the second quarter of 2001, up from 59 percent during the first quarter.[83] A recent *Wall Street Journal* article, citing a study by Merrill Lynch, reported that in the second quarter of 2001, cable companies added 667,000 new customers, while DSL carriers added only 374,000 new subscribers.[84] Such evidence indicates that SBC is non-dominant in its provision of DSL service. SBC's market share of 32 percent is incompatible with a finding that SBC possesses market power in the mass-market broadband services market.

2. Demand Elasticities

62. An analysis of demand elasticities reinforces the conclusion that SBC is non-dominant in the mass-market broadband services market. In previous non-dominance orders, the Commission relied solely on indirect evidence of demand elasticity. For example, in the *AT&T*

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82. YANKEE GROUP BROADBAND, *supra* note 40, at 3.

83. MORGAN STANLEY TELECOM, *supra* note 77, at 15. The report estimates that cable operators added 779,000 subscribers during the second quarter of 2001, compared with 432,000 new DSL subscribers. It does not take into account subscribers who chose other broadband platforms. Consequently, even fewer than 36 percent of new broadband lines were DSL. Morgan Stanley's estimate of 432,000 new DSL subscribers during the second quarter of 2001 is consistent with data from Telechoice, which estimates that 420,000 new DSL lines added during the second quarter of 2001. *See Communications Daily,* Aug. 14 , 2001, at 6.

Reclassification Order, the Commission relied heavily on high churn rates in concluding that long-distance customers had highly price-elastic demand. It also cited its finding in the *AT&T Streamlining Order* that business customers had highly price-elastic demand based on evidence that business customers tend to be more sophisticated and knowledgeable purchasers of telecommunications services that are aware of the choices available to them and have no strong bias towards AT&T versus other interexchange carriers.

63. Here we present not only the type of indirect evidence of high demand elasticities upon which the Commission has relied in the past, but also direct *quantitative* evidence of the own-price elasticity of demand for mass-market broadband services. That quantitative evidence is derived from a study conducted in 2000 by Professors Paul Rappoport, Don Kridel, Lester Taylor, and Kevin Duffy-Demo. Using Marketing Science survey data for Internet use and TNS Telecoms survey data for broadband access availability and prices, Professors Rappoport, Kridel, Taylor, and Duffy-Demo calculated that the own-price elasticity of demand (the percentage change in demand for every one-percent increase in price) for DSL services is negative 1.462, which implies that for every one-percent increase in the price of DSL service, demand decreases by 1.462 percent.[85] That result suggests that demand for DSL service is, by definition, price-elastic.[86]

64. Because the study by Professors Rappoport *et al.* was based on data from the first quarter of 2000, we decided to update it, using nearly the identical econometric model and data

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84. Shawn Young, *How Do I Choose between Cable Modem and DSL?,* WALL ST. J., Sept. 10, 2001, at R15.

85. Paul Rappoport, Don Kridel, Lester Taylor & Kevin Duffy-Demo, *Residential Demand for Access to the Internet*, University of Arizona Working Paper, Spring 2001, at Table 10; *see also* Paul Rappoport, Don Kridel & Lester Taylor, *An Econometric Study of the Demand for Access to the Internet*, *in* THE FUTURE OF THE TELECOMMUNICATIONS INDUSTRY: FORECASTING AND DEMAND ANALYSIS (D.G. Loomis & L. D. Taylor eds., Kluwer Academic Publishers 1999).

from the fourth quarter of 2000 and the first quarter of 2001. In its quarterly survey, TNS Telecoms obtains detailed Internet usage data from approximately 3,500 respondents. Each respondent is asked, among other things, (1) whether DSL and/or cable modem access is available in his or her neighborhood, and (2) whether he or she subscribes to dial-up access or broadband access, and, if so, at what price. Respondents also supply socio-economic information concerning their income, race, occupation, and other characteristics that might influence the decision to purchase Internet services.

65. In the present application, standard regression analysis is not appropriate to estimate the consumer-choice model because the decision to purchase a broadband access technology is a binary (as opposed to continuous) variable. Hence, like Rappoport, *et al.*, we estimated a nested logit model, which allows us to examine the discrete choice across all Internet access alternatives, and the discrete choices within broadband-access alternatives. Details of the model are described in the Appendix. A brief description is provided here.

66. The model involves two stages in the estimation procedure. In the first stage, we assume that the customer chooses between no Internet access, narrowband Internet access, and broadband Internet access based on the following variables: (1) the customer's income, (2) the customer's gender, (3) the customer's age, and (4) the customer's education. In the second stage, conditional on choosing broadband Internet access, we assume that the customer chooses between cable modem and DSL services based on the prices of each service. Before estimating the model, we removed from the dataset any customer who did not have access to both cable modem and DSL services. The output from the regression model appears in the Appendix. Table 2 presents the updated elasticity estimates.

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86. *See*, *e.g.*, WILLIAM J. BAUMOL & ALAN S. BLINDER, MICROECONOMICS: PRINCIPLES AND POLICY

TABLE 2: OWN-PRICE AND CROSS-PRICE ELASTICITIES FOR DSL SERVICE

Service	Price of DSL	Price of Cable Modem
Choice: DSL	-1.184	0.415
Choice: Cable Modem	0.591	-1.220

Source: Criterion Economics, L.L.C.

As Table 2 shows, the own-price elasticity of DSL is still high (the comparable estimate from Rappoport *et al*. is –1.462), which suggests that demand for DSL service is price-elastic. Moreover, the cross-price elasticity of demand for cable modem with respect to a change in the price of DSL is high as well: for every 1 percent increase in the price of DSL service, the demand for cable modems rises by 0.591 percent. The comparable elasticity from Rappoport *et al*. was 0.766 percent. The high cross-price elasticity is further evidence that DSL and cable modems are in the same product market, and that DSL providers do not have market power.

67. This direct, quantitative evidence that the own-price elasticity of DSL is very high is corroborated by the type of indirect evidence on which the Commission has relied in the past. In the *AT&T Reclassification Order,* the Commission concluded that users of long-distance services had highly price-elastic demand based on evidence of high customer churn rates in the long-distance market. In particular, the Commission cited evidence submitted by AT&T that as many as 20 percent of its residential customers switched carriers at least once a year. The Commission found that "[t]his high churn rate among residential consumers . . . demonstrates that these customers find the services provided by AT&T and its competitors to be very close substitutes."[87]

68. The churn rate for SBC's DSL service is well above those reported by AT&T. From January through July 2001, SBC's churn rate was 5.7 percent monthly—almost three times

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133 (Dryden Press 7th ed. 1994) (demand is elastic whenever "a rise in the price will decrease total revenue.").

87. *AT&T Reclassification Order*, *supra* note 16, at 3305 ¶ 63. *See also* Policy and Rules Concerning the Interstate, Interexchange Marketplace, Implementation of Section 254(g) of the Communications Act of 1934, CC Dkt. No. 96-61, 11 F.C.C. Rcd. 20,730, 20,743 ¶ 21 (1996).

the AT&T churn rate on which the FCC relied in concluding that customers of domestic, interstate interexchange services had highly price-elastic demand. Some of this churn is undoubtedly attributable to customers who do not leave SBC for a competitor. Nevertheless, the Commission considers churn to be a reasonable proxy for demand elasticity.

69. Other evidence underscores that DSL subscribers have highly price-elastic demand. First, the features that consumers most value from high-speed Internet access offerings are not unique to DSL service. As noted above, consumer surveys show that consumers who choose a broadband Internet access service do so primarily (1) to increase the speed of ordinary web surfing, (2) to take advantage of applications that require greater bandwidth, (3) to obtain an "always-on" connection, and (4) to free up their telephone line when they are using the Internet. All of these benefits are available not only from DSL, but also from cable modem and other broadband options. Surveys indicate that many consumers who are interested in broadband service are not predisposed towards cable or DSL service. They do not care about what platform they use to obtain broadband service; they want the features of a broadband connection.[88]

70. Second, like business customers, users of high-speed Internet access services tend to be more sophisticated in their telecommunications purchases than the average consumer.[89] They are thus likely to be aware of their options and to consider alternatives before making a

88. YANKEE GROUP BROADBAND, *supra* note 40, at Exhibit 12. Among actual broadband users, there is some evidence that customers prefer cable modem service to DSL service. For example, a recent Forrester Research report found that cable modem service scored slightly higher than DSL service on each of six separate measures of quality, technical performance, and customer service. *See* FORRESTER STUDY, *supra* note 74, at Figure 1.2.

89. *See* YANKEE GROUP BROADBAND, *supra* note 40, at 7 (high-speed Internet access households tend to be wealthier, younger, and more technologically savvy); General Accounting Office Report, *Telecommunications, Characteristics and Choices of Internet Users,* Feb. 2001, at 12 (showing that Internet users tend to have a higher household income and more education than the general U.S. population).

choice of providers. The FCC found this consideration compelling in both the *AT&T Streamlining Order* and the *AT&T Reclassification Order*.[90]

71. In short, econometric and qualitative evidence indicates that there is high price-elasticity of demand among DSL subscribers. This evidence also supports the conclusion that SBC is non-dominant in its provision of DSL services.

3. Supply Elasticities

72. A third consideration in determining SBC's non-dominant status is supply elasticity. In evaluating supply elasticity in its *AT&T Reclassification Order*, the FCC focused on two factors: (1) the capacity of existing competitors to expand supply and (2) low entry barriers for new suppliers.[91] It concluded that AT&T's competitors "can add significant numbers of new customers with their existing capacity and add incrementally to this capacity as new customers are added to their networks."[92]

73. The same is clearly true of SBC's competitors that provide mass-market broadband service. Those competitors could absorb immediately, and without additional investment, significant numbers of SBC's DSL subscribers and they could absorb SBC's entire customer base with little or no additional investment.

74. First, as discussed above, there are numerous providers of competitive mass-market broadband services throughout SBC's region. Two-thirds or more of the households in SBC's territory are served by cable facilities that are capable of providing broadband services. Yet the vast majority of this plant is not being used. Table 2 shows that, as of the end of 2000,

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90. *AT&T Streamlining Order*, *supra* note 14, at 5887, ¶ 37; *AT&T Reclassification Order*, *supra* note 16, at 3306, ¶ 65.

91. *AT&T Reclassification Order*, *supra* note 16, at 3303 ¶ 57.

95.0 percent of U.S. homes that were upgraded for cable modem services and had not subscribed to the service.[93]

TABLE 3: EXCESS CAPACITY IN CABLE MODEM SYSTEMS

Year	Households That Are Ready for Cable Modem Service (Millions)	Cable Modem Subscribers (Millions)	Excess Capacity*
1999	48.3	1.47	97.0%
2000	58.6	2.94	95.0%
2001	64.4	4.99	92.3%
2002	70.2	7.27	89.6%
2003	73.2	9.78	86.6%

Source: *Available at* http://www.emarketer.com/analysis/broadband/050800_cable.html.
Note: * Equal to 1 minus the ratio of cable modem subscribers to households that are cable-modem-ready.

This excess capacity indicates that cable operators alone could absorb most of SBC's DSL subscribers with only negligible additional dedicated or shared (downstream) investment. For those homes that are not yet cable-modem-ready, it is reasonable to believe that those homes could and would soon be wired, because the incremental cost of readying a home for cable modem service is estimated to be $468 in 2001—a figure that pales in comparison to the expected revenues.[94] With respect to shared investment to alleviate congestion on the cable network,[95] we would expect that this cost, when *averaged* across all new subscribers, would be a much smaller component than the dedicated component.[96] Indeed, the congestion problem does not appear to be specific to any particular access technology.[97] It is therefore reasonable to

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92. *Id*. at 3304 ¶ 60. AT&T had argued that its competitors could immediately absorb 15 percent of AT&T's switched traffic at no additional cost, and two-thirds of its switched traffic within one year at a cost of $660 million. *Id.* at 3303-04 ¶ 59.

93. Available at http://www.emarketer.com/analysis/broadband/050800_cable.html.

94. JP MORGAN BROADBAND, *supra* note 40, at 70.

95. Because the design of a cable the network is a shared-bandwidth one, the more subscribers accessing the network and transmitting data, the more congestion arises across the entire network. *See, e.g.*, *DSL v. Cable: An Internet Boxing Match*, COMM. NEWS, Feb. 1, 2001, at 63.

96. The detailed cost analyses that we have reviewed make no mention of the shared component when demonstrating the business case for cable modem service.

97. According to *Network Computing*, the real bottleneck exists at the back-end servers providing content, not in the customer's immediate vicinity: "Both DSL and cable can use content-delivery-network

believe that such costs would not preclude a cable modem provider from accommodating SBC's DSL customers. In the terminology of the U.S. Court of Appeals for the D.C. Circuit, SBC's competitors would face an attractive investment-to-revenue ratio.[98]

75. Of course, the Commission need not rely on cost estimates to conclude that cable operators can readily expand their capacity. The rapid rate at which they are upgrading their networks speaks for itself. Between the second quarter of 2000 and the second quarter of 2001, an additional 18 million cable homes were upgraded for two-way capability—expanding the availability of cable modem service from 48 million homes to over 60 million homes.[99] Assuming, based on SBC's share of access lines nationwide, that one-third of those upgrades took place in the SBC region, then, under current deployment schedules, cable operators could, within one year, expand their reach to nearly 6 million new subscriber homes in the SBC region—5.5 times SBC's current DSL customer base.[100]

76. Equally telling is the rate at which cable modem providers are adding subscribers. Despite a recent slowing of growth, the five largest cable operators added more than 600,000 cable modem subscribers during the second quarter of 2001, according to Warren Communications News' Telecom Research Group.[101] Thus, again assuming that one-third (200,000) of these new cable modem subscribers were in SBC's territory, these five cable

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techniques, like caching, content replication and multicast, to improve performance. Here, neither has the advantage." David Willis, *Cable's Edge*, NETWORK COMPUTING, Aug. 20, 2001, at 35.

98. *See* AT&T Corp. v. FCC, 236 F.3d 729, 733 (D.C. Cir. 2001).

99. MORGAN STANLEY TELECOM, *supra* note 77, at 9, Exhibit 5.

100. During the second quarter of 2001, cable facilities serving 3.9 million households were upgraded so that they were capable of providing cable modem service. *See Market Researchers Erred in Predictions on DSL vs. Cable Modems*, 21 COMM. DAILY, Aug. 15, 2001, *available at* 2001 WL 5053831 (citing a February 2001 study by TeleChoice measuring 3.9 million cable-ready households). Assuming, again, that one-third of those upgrades were in SBC territory, the 1.3 million additional lines could more than accommodate all of SBC's existing DSL subscribers.

101. *TW Cable Tops AT&T as Biggest High-Speed Provider, Study Shows,* COMM. DAILY, Aug. 17, 2001 at 2.

operators added *in one quarter* a number of customers that is equivalent to 18 percent of SBC's total DSL customer base.

4. Cost Structure, Size, and Resources

77. Another set of considerations that the FCC factors into its non-dominance analysis is whether the firm at issue has market power by virtue of having greater resources, size, financial strength, and a more favorable cost structure.[102] As the FCC has twice noted, the question is not whether the firm at issue has advantages in the relevant market, but "whether any such advantages are so great to preclude the effective functioning of a competitive market."[103] Indeed, as the FCC recognized, "the competitive process itself is largely about trying to develop one's own advantages, and all firms need not be equal in all respects for this process to work."[104]

78. With respect to the market for high-speed Internet access services, SBC does not enjoy any advantages over its competitors with respect to size, resources, financial strength, and cost structure. SBC certainly does not have advantages that are "so great [that they] preclude the effective functioning of a competitive market."[105]

79. SBC competes in its provision of mass-market broadband services against, among others, the following multiple system operators (MSOs) with the following market capitalizations: AOL Time Warner ($147.1 billion), AT&T Corp. ($68.2 billion), Comcast Corp. ($33.9 billion), Cox Communications, Inc. ($25.1 billion), and Cablevision Systems Corp. ($7.2

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102. *See AT&T Reclassification Order*, *supra* note 16, at 3309 ¶ 73.

103. *Id.* (citing *First Interexchange Competition Order*, 6 F.C.C. Rcd. at 5891-92). *See also AT&T Streamlining* Order, *supra* note 14, at 5901 n.187; *COMSAT Non-Dominance Order*, *supra* note 19, at 14,130-32 ¶¶ 92-93 (agreeing that COMSAT's size and resources gave it significant competitive advantages but forbearing, nevertheless, from dominant carrier regulation of COMSAT).

104. *AT&T Reclassification Order*, *supra* note 16, at 3309 ¶ 73; *AT&T Streamlining Order*, *supra* note 14, at 5901 n.189.

105. *AT&T Reclassification Order*, *supra* note 16, at 3309 ¶ 73.

billion).[106] Under no stretch of the imagination could these MSOs be called fledgling competitors that lack the size, resources, or financial stability to compete with SBC. Indeed, the rate at which cable operators are upgrading their cable facilities in itself belies any such claim.

80. Nor does SBC enjoy cost advantages vis-à-vis its competitors that effectively preclude competition. To the contrary, SBC faces cost *disadvantages* relative to its cable competitors. According to analyst reports, the costs of deploying DSL service exceed the cost of deploying cable modem service. For example, JP Morgan and McKinsey & Company conclude that the average cost per customer of a large ILEC undertaking a massive DSL deployment is currently $86 per month per customer.[107] That cost, they conclude, will decline by 2005 to $38 per month per customer. In contrast, the average, per-customer cost of providing cable modem service is estimated to be $55, declining by 2005 to $30.[108] At no point during the next five years is the average cost of providing DSL service expected to be less than the average cost of providing cable modem service. To the contrary, the costs of cable modem providers are projected to remain substantially lower throughout that period. The conclusion by JP Morgan and McKinsey that cable modem costs are lower than DSL costs is echoed in an August 2001 report issued by the Yankee Group, which predicted: "Cable modem prices are likely to remain cheaper than DSL prices for comparable service levels due mainly to the low service provision costs on the part of MSOs."[109]

81. In addition to facing the other obstacles, described above, DSL providers face significant technological constraints. DSL cannot reach customers whose copper loops exceed

106. Downloaded from www.yahoo.com on Sept. 28, 2001.
107. JP MORGAN BROADBAND, *supra* note 40, at Chart 45.
108. *Id.* at Chart 46.
109. YANKEE GROUP BROADBAND, *supra* note 40, at 4.

18,000 feet from the service point,[110] and the cost of deploying service to customers whose loops are routed through digital loop carriers far exceeds the cost of reaching customers with all-copper loops. Although cable operators face their own constraints due to their service architecture, they do not face distance limitations that significantly impair their ability to reach large numbers of customers.

82. The advantages enjoyed by cable operators are magnified by the asymmetric regulation of DSL and cable modem services. As stated by SBC and BellSouth in their joint comments in the *Cable Open Access* proceeding:

> Telephone companies have to "unbundle" the wireline spectrum that they use for broadband . . . and make it available to all comers at regulated prices. Cable companies do not. Telephone companies must permit their competitors to "collocate" equipment in telephone company premises to make it easier to use that "unbundled" spectrum. Cable companies do not. Telephone companies are almost completely locked-out of the multi-billion dollar (and rapidly expanding) Internet backbone service. Cable companies are not. Telephone companies must offer their retail broadband transmission services to competitors at a federally mandated discount. Cable companies do not. Telephone companies must pay-in to universal service when they provide broadband access. Cable companies do not. And telephone companies have been forced to carve-out their broadband transmission services into a separate affiliate as a condition to gaining regulatory approval of recent mergers. Cable companies have not.[111]

But the disparity between incumbent LECs and cable operators is not limited to the treatment of their broadband services. Incumbent LECs are highly regulated in their provision of telephone exchange and exchange access service. Cable service, in contrast, is largely deregulated.[112]

83. In short, no credible argument can be made that SBC enjoys advantages in the provision of high-speed Internet access services, much less that it has advantages that effectively preclude the functioning of that market. The real issue is whether the very opposite is true: Are

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110. *See* Drew Robb, *DSL: Don't Tread on Me*, 31 BUS. COMM. REV. 5861, May 1, 2001.

111. Comments of SBC Communications Inc. and BellSouth Corp., GN Dkt. No. 00-185, Dec. 1, 2000, at 6-7.

112. *See*, *e.g.*, ROBERT W. CRANDALL & HAROLD FURCHTGOTT-ROTH, CABLE TV: REGULATION OR COMPETITION? (Brookings Institution 1996).

the advantages enjoyed by cable operators so great as to render them dominant in the provision of mass-market broadband services?

C. SBC Could Not Leverage Market Power from Telephone Exchange or Exchange Access Services into the Mass-Market Broadband Services Market

84. We have demonstrated above that SBC does not now have market power in the advanced services market. The final component of the FCC's non-dominance framework is to address whether SBC could nevertheless quickly acquire market power in the broadband Internet access market by leveraging any market power it might have in the provision of telephone exchange or exchange access services. For purposes of this analysis, the Commission has held that the issue is not whether SBC might enjoy certain advantages in the broadband market by virtue of its position in the local exchange market. The issue is not even whether SBC might confer advantages on its broadband operations through discrimination and cross-subsidization. Rather, the issue is whether SBC could leverage market power in the local exchange market to the point that it *quickly* acquired market power in the mass-market broadband services market. As the FCC explained in the *BOC Classification Order*:

> improper allocation of costs by a BOC is of concern because such action may allow a BOC to recover costs from subscribers to its regulated services that were incurred by its interLATA affiliate in providing competitive interLATA services. In addition to the direct harm to regulated ratepayers, this practice can distort price signals in those markets and may, under certain circumstances, give the affiliate an unfair advantage over its competitors . . . For purposes of determining whether the BOC interLATA affiliates should be classified as dominant, however, we must consider only whether the BOCs could improperly allocate costs to such an extent that it would give the BOC interLATA affiliates, upon entry or soon thereafter, the ability to raise prices by restricting their own output.[113]

The Commission's conclusion that dominant carrier regulation of a service is appropriate only if the BOC could quickly acquire market power in that service is sound. As the Commission noted,

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113. *BOC Classification Order*, *supra* note 11, at 15,815 ¶ 103.

"our dominant carrier regulations are generally designed to prevent a carrier from raising prices by restricting its output[.] . . . We agree with DOJ that applying dominant carrier regulation to an affiliate in a downstream market would be 'at best a clumsy tool for controlling vertical leveraging of market power by the parent, if the parent can be directly regulated instead.'"[114] Moreover, as the Commission noted, "regulations associated with dominant carrier classification can . . . have undesirable effects on competition."[115] Thus the Commission does not impose dominant carrier status on an entity or service unless the firm at issue can control price in the market by restricting its output of that service. The FCC does not impose dominant carrier status simply to ensure what some call "a level playing field."

85. It is inconceivable that any showing of leveraging could be made. As noted above, cable operators enjoy significant advantages in the broadband Internet access market. To quickly acquire market power, SBC would not only have to overcome these advantages, but also would have to establish its own overwhelming advantages. Considering that the services in which SBC is ostensibly dominant—local exchange and exchange access services—are highly regulated, that outcome is most unlikely.

86. Of course, the FCC need not speculate on this point. If, soon after entering the mass-market broadband services market, SBC could have acquired monopoly power in that market, it presumably would have done so. Yet SBC's market share continues to be dwarfed by its cable competitors, and those competitors are signing up two of every three new customers. Those facts show that SBC cannot use its position in the local exchange market to obtain dominance in the mass-market broadband services market.

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114. *Id*. at 15,804 ¶ 85, 15,808 ¶ 91 (quoting DOJ Aug. 30, 1996 Reply at 27).
115. *Id.* at 15,808 ¶ 90.

87. In any event, SBC could not, even as a theoretical matter, quickly acquire market power in the mass-market broadband services market by leveraging any market power that it might retain in the local exchange market. In its past orders, the Commission has recognized three ways in which such leveraging could occur: cross-subsidization, discrimination, and the effectuation of a price squeeze. We address each below in the context of the relevant product market.

88. In the *BOC Classification Order*, the Commission held that BOC long-distance affiliates could obtain the ability, through cross-subsidization, to raise prices by restricting their own output only "if a BOC's improper allocation enabled a BOC interLATA affiliate to set retail interLATA prices at predatory levels (*i.e.,* below the costs incurred to provide those services), drive out its interLATA competitors, and then raise and sustain retail interLATA prices significantly above competitive levels."[116] Thus the issue here is whether, through cross-subsidization, a BOC could set DSL prices at predatory levels, drive its broadband competitors out of the market, and then raise and sustain its prices significantly above competitive levels.

89. Even in the unlikely event that SBC could drive a cable operator into bankruptcy, the bandwidth capacity of that carrier would remain intact, ready for another firm to use (after a liquidation sale) and immediately undercut SBC's noncompetitive prices. If SBC were to attempt predatory pricing in the broadband market, it could not expect to recoup its investment in sales made below incremental cost. The FCC has expressly embraced this economic reasoning when it concluded that predation is implausible with respect to either long-distance fiber-optic

116. *Id*. at 15,815 ¶ 103.

networks[117] or spectrum.[118] The argument applies with equal force to the fixed broadband infrastructure of a cable operator.

90. Clearly such cross-subsidization is not possible. SBC has, until quite recently, been treated as a non-dominant provider of DSL services, and its prices for DSL Internet access services—far from being predatory—are *higher* than prevailing prices for cable modem service, as are its costs.[119] Moreover, SBC could not possibly finance a predatory pricing strategy through cross-subsidization. SBC's basic local exchange rates are subject to rigorous price regulation, including price ceilings, in each of its states. Thus, SBC has no ability to raise basic local exchange prices to finance below-cost DSL prices. Similarly, SBC's switched-access prices are capped, as a result of the *CALLS* proceeding, at 0.55 cents per minute and its special-access rates are constrained by price cap regulation in all areas that do not exhibit sufficient competition to qualify for pricing flexibility.[120] Given these regulatory requirements, SBC has no ability to finance below-cost DSL prices with price increases in telephone exchange or exchange access services.

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117. *See* Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as Amended; and Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area, Notice of Proposed Rulemaking, CC Dkt. No. 96-149, 11 F.C.C. Rcd. 18,877, 18,943 ¶ 137 (1996) (citing Daniel F. Spulber, *Deregulating Telecommunications*, 12 YALE J. ON REG. 25, 60 (1995)). *See also* J. GREGORY SIDAK & DANIEL F. SPULBER, DEREGULATORY TAKINGS AND THE REGULATORY CONTRACT: THE COMPETITIVE TRANSFORMATION OF NETWORK INDUSTRIES IN THE UNITED STATES 93-94 (Cambridge Univ. Press 1997) (making same argument).

118. *See* Applications of Voicestream Wireless Corp., Powertel, Inc., Transferors, and Deutsche Telekom AG, Transferee, for Consent to Transfer Control of Licenses and Authorizations Pursuant to Sections 214 and 310(d) of the Communications Act and Petition for Declaratory Ruling Pursuant to Section 310 of the Communications Act and Powertel, Inc., Transferor, and Voicestream Wireless Corp., Transferee, for Consent to Transfer Control of Licenses and Authorizations Pursuant to Sections 214 and 310(d) of the Communications Act, etc., Memorandum Opinion and Order, IB Dkt. No. 00-187, 16 F.C.C. Rcd. 9779, ¶ 90 (released Apr. 27, 2001).

119. Those higher prices are a product both of the higher costs of DSL deployment and the Commission's asymmetric regulatory requirements, which further raise SBC's cost of providing DSL service.

120. Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Low-Volume Long Distance Users; Federal-State Joint Board on Universal Service, CC Dkt. No. 96-262 et al., 15 F.C.C. Rcd. 12,962, 13,029 ¶ 162 (2000).

91. In the *BOC Classification Order,* the Commission expressed concern that a BOC could "discriminate against unaffiliated interLATA carriers, such as through poorer quality interconnection arrangements or unnecessary delays in satisfying its competitors' requests to connect to the BOC's network."[121] The Commission nevertheless concluded that a BOC could not discriminate "to such an extent that [its] affiliate would gain the ability to raise prices by restricting its own output upon entry or shortly thereafter."[122]

92. In this case, similar concerns about discrimination are misplaced. Unlike the long-distance market in 1996, the broadband Internet access market is characterized by significant intermodal competition. Cable companies and wireless providers, in particular, are in no way dependent upon SBC services or facilities in their provision of broadband Internet access. Thus SBC has no ability to discriminate against these entities. For that reason alone, it could not possibly acquire market power through discrimination.

93. In the *BOC Classification Order*, the Commission held that "the entry of a BOC's affiliate into the provision of in-region, interstate, domestic, interLATA services might give the BOC an incentive to raise its price for access services to disadvantage its affiliate's rivals, increase its affiliate's market share, and increase the profits of the BOC overall."[123] It concluded nonetheless that "price cap regulation of the BOCs access service sufficiently constrains a BOC's ability to raise access prices to such an extent that the BOC affiliate would gain, upon entry or soon thereafter, the ability to raise prices of interLATA services above competitive levels by restricting its own output of those services."[124]

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121. *BOC Classification Order*, *supra* note 11, at 15,821-22 ¶ 111.
122. *Id.*
123. *Id*. at 15,829 ¶ 125.
124. *Id.* at 15,829-30 ¶¶ 125-26.

94. As with discrimination, the price squeeze concerns addressed in the *BOC Classification Order* are inapt in the present context. Because SBC's largest competitors in the broadband Internet access market do not rely on BOC facilities, the BOCs could not possibly acquire market power in that market by raising the costs of its rivals. Moreover, those competitors who do rely on BOC facilities—DLECs who purchase unbundled loops—are able to lease those facilities at TELRIC rates, not allegedly inflated access rates. Thus, there is no basis upon which the Commission could conclude that the BOCs could acquire market power in their provision of broadband Internet access services by effecting a price squeeze.

III. SBC IS NON-DOMINANT IN THE LARGER-BUSINESS ADVANCED SERVICES MARKET

95. Larger-business advanced services are provided by the big three IXCs, the RBOCs, and other providers to medium-sized and larger firms that require high-speed connections between multiple premises—for example, from one local area network (LAN) to others. In the following sections, we elaborate on the relevant product and geographic markets. We then apply the FCC's four-part non-dominance test to determine whether SBC has market power in the larger-business advanced services market.

A. Larger-Business Advanced Services Constitute a Relevant Product Market

1. The Product Market

96. The two primary services in this packet-switched submarket are frame relay service and asynchronous transfer mode (ATM) service.[125] Frame relay service is a packet-based transport protocol developed primarily for the efficient transport of unpredictable or "bursty"

125. There are presumably other technologies that could be included in the market. For example, older packet-switching services, such as Switched Multimegabit Data Service (SMDS), and new services, such as Gigabit Ethernet, are potential substitutes for ATM and frame relay.

data associated with LAN-to-LAN communications.[126] By comparison, ATM is a connection-oriented service, which is used either as a transport medium or as a backbone supporting other transport protocols such as frame relay.[127] Whereas frame relay carries almost exclusively data traffic, ATM also supports integrated voice and video traffic.[128]

97. Our market definition analysis proceeds in an identical fashion as our previous analysis of mass-market broadband services. We apply the same criteria to assess whether advanced services to larger businesses constitutes a relevant product market. First, the services in this market appear to serve the same function from the customer's viewpoint—that is, transmitting data between computers and between networks of computers. In addition, ATM and frame relay are used to provide connections between LANs and the Internet.[129] Moreover, ATM and frame relay services are used predominantly for high-speed applications. For example, more than three-quarters of all frame relay revenues are derived from services provided at fractional DS-1 speeds (typically between 400 and 800 Kbps) or above, and more than 60 percent are derived from services provided at speeds between DS-1 (1.5 Mbps) and DS-3 (44 Mbps).[130] ATM service is provided at speeds of between 1.5 Mbps and 10 Gbps, but nearly two-thirds of ATM revenues are derived from services provided at speeds between DS-1 and DS-3.[131]

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126. IDC, U.S. FRAME RELAY SERVICES: MARKET FORECAST AND ANALYSIS, 2000-2005, at 3 (2001) [hereinafter IDC FRAME RELAY STUDY].

127. IDC, ATM SERVICES MARKET SHARE AND ASSESSMENT, 2000-2005, at 3 (2001) [hereinafter IDC ATM STUDY].

128. *Id*.

129. *See*, *e.g.*, Mulitmedia Telecommunications Association, Investext Rpt. No. 7044818, Telecom-Market Review and Forecast '98 – Industry Report, Jan. 1, 1998, at *10 ("LAN interconnection and access to the Internet are now nearly universal in the business marketplace. The focus has shifted to providing high-speed transmission for large volumes of data. Frame relay, ATM, T1/T3, ISDN, SMDS, Gigabit Ethernet, and fast modems are among the equipment and technologies enhancing the needs of local area network users.").

130. IDC FRAME RELAY, *supra* note 126, at Table 3.

131. IDC ATM STUDY, *supra* note 127, at Table 3.

98. Second, larger-business customers view the services within this market as substitutes for each other. Several analysts have observed significant migration between frame relay and ATM services.[132] IDC describes the explicit connection between frame relay and ATM networks:

> As frame relay networks grow, corporations require ever more bandwidth at their hub sites. With service interworking, customers can build hybrid backbone networks, upgrading corporate data centers with higher-speed ATM connections while retaining T1 frame relay connections at the branch office sites.[133]

Indeed, frame-relay-to-ATM internetworking is a primary contributor to the growth of ATM revenue.[134]

99. Third, advanced-services providers view the services within this market as substitutes for one other. Service providers likewise view the services in this market as interchangeable with one another. For example, AT&T, [135] WorldCom,[136] Sprint,[137] and other

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132. STRATECAST PARTNERS, ATM AND FRAME RELAY MARKET ASSESSMENT, DATA/INTERNET SERVICES GROWTH STRATEGIES, Sept. 2001, at 16 ("ATM's biggest appeal will continue to at the high-end of the market, where companies can cost justify the use of the technology for their application requirements. At the low-end of the market, the technology will continue to be challenged by frame relay."); Multimedia Telecommunications Association, Industry Report, Telecom-Market Review & Forecast '98-Lan-Wan Netwk Mkt., Jan. 1, 1998, at *19 ("Current users of ATM fall into four general categories: ISPs; government, medical, and educational institutions; companies with heavy LAN interconnect requirements; and frame relay users with the need to connect high-capacity sites.").

133. IDC ATM STUDY, *supra* note 127, at 7.

134. *Id*. at Figure 1.

135. J. Jones, *AT&T Readies Outsourced E-mail, Network Services*, INFOWORLD DAILY NEWS, Jan. 24, 2000 (AT&T states that its Managed ATM service is "aimed at enterprises migrating out of total reliance on frame-relay networks to newer technologies such as ATM or frame relay-to-ATM service interworking."); AT&T Corp., Data and IP Services, Products and Services, ATM http://www.ipservices.att.com/brochures/atm.pdf (AT&T's High Speed Packet Network . . . enables you to migrate your network smoothly and gradually, on a location by location basis, from frame relay to ATM.")

136. MCI WorldCom, Inc., Products and Services, ATM, http://www.worldcom.com/us/products/datanetworking/atm/index.phtml.) (WorldCom's Frame Relay to ATM Service Interworking (FRASI) "provides a pathway of migration for today's frame relay networks to the comprehensive networking capabilities of ATM.").

137. *See* Sprint Corp., Sprint Business, Products and Solutions, Data, ATM, ATM and Frame Relay Technical Report, http://www.sprintbiz.com/business/resources/resource/SPR6859c.pdf ("Once your data or multimedia applications outgrow frame relay's bandwidth limitations, Sprint can assist you in developing a gradual migration path to ATM.")

carriers[138] all advertise ATM service as a replacement for Frame Relay service. Various service providers also have recognized that new services like Gigabit Ethernet may well "cannibalize" existing services like Frame Relay and ATM.[139] Several carriers have recognized significant substitution between the various packet-switching services that they offer. For example, WorldCom has stated that "when we introduce IP VPNs we are going to cannibalize some of our frame relay business."[140]

100. Fourth, the services within this market are generally priced in a similar manner. For example, AT&T charges $3,130 per month for frame relay service at 1.536 Mbps,[141] and charges the identical amount for ATM ports at 1.536 Mbps.[142] For comparison purposes, AT&T charges $7,515 per month per ATM port at 9.264 Mbps.[143] Under SBC's tariff, a DS-3 link and port for Frame Relay service in SBC's central region costs $4,435 per month (under a one-year contract) plus a $3,030 non-recurring charge.[144] By comparison, a DS-3 link and port for ATM service in SBC's central region costs $3,950 per month (under a one-year contract) plus a $3,000 non-recurring charge.[145]

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138. *See, e.g.*, Adelphia Business Solutions, Products, Frame Relay http://www.adelphia-abs.com/html/products/frdatasheet.pdf ("Frame relay can reduce your company's operating costs, while improving your network performance and simplifying network management. Plus, it can help companies prepare for future network growth by providing a migration path to Asynchronous Transfer Mode (ATM) technology."); *Equant First Global Carrier to Integrate Voice and Data Over ATM, IP and Frame Relay*, GLOBAL NEWS WIRE, Apr. 22, 2000 ("Employ Equant's new frame relay-to-ATM enhancement to seamlessly migrate from frame relay to ATM at speeds from 2Mbps and above, without having to install costly equipment to facilitate the conversion.").

139. *See*, *e.g.*, *Putting romance back in the data business; Company Business and Marketing*, COMM. WK. INT'L., Feb. 5, 2001, at 1 (quoting of Ron Beaumont, COO, of WorldCom saying: "When we introduce IP VPNs we are going to cannibalize some of our frame relay business.").

140. *Id.*

141. IDC FRAME RELAY STUDY, *supra* note 126, at Table 26.

142. IDC ATM STUDY, *supra* note 127, at Table 21.

143. *Id*.

144. SBC Advanced Solutions Inc., Advanced Services Tariff, Tariff F.C.C. No. 1 § 5.4 (Sept. 10, 2001).

145. *Id*. § 4.4.

101. In summary, packet-switched services serve the same function, are considered substitutes from the perspective of both users and producers, and are priced in a similar fashion. Hence, it is reasonable to treat those services as part of the same relevant product market.

102. We recognize that there might be other services that, for some customers, are substitutes for packet-switched services. In particular, for some subset of large-business customers, dedicated or private line connections might be economically attractive alternatives. But for most customers, a dedicated connection is a viable alternative only if they can generate sufficient traffic to justify a dedicated facility. Moreover, dedicated facilities are not economically viable for a business that wishes to connect multiple locations.[146] For these reasons, we treat packet-switching services as a discrete market. Even if our focus might be too narrow, the inclusion of additional services, such as dedicated connections or mass-market broadband connections, only strengthens our conclusion of non-dominance because it increases supply substitutability from other services and other providers.[147]

2. The Geographic Market

103. Business customers use packet-switching services to transmit information between at least two specified end points—for example, between two distant customer locations, or between a single customer location and the Internet. As described above, under the Commission's framework for defining geographic markets, each point-to-point market constitutes a distinct geographic market. The Commission has held, however, that, because it is both impractical and ultimately futile to analyze market power for each individual point-to-

146. In a frame network design, a "frame relay access from each site is provided into the network cloud, requiring only a single connection point . . . Connections from a single site to any of the other sites can be easily accommodated using the pre-defined network connections of the virtual circuits." *See* REGIS J. BATES & DONALD GREGORY, VOICE AND DATA COMMUNICATIONS HANDBOOK 622 (McGraw Hill 1998).

147. *See* Landes & Posner, *supra* note 10, at 944-52.

market, the Commission will "aggregate into a relevant geographic market those customers facing similar choices regarding a particular relevant product or service in the same geographic area."[148]

104. Applying that framework here, the relevant geographic area for analysis is SBC's entire local service territory. From a demand perspective, customers that purchase packet-switching services typically seek to connect multiple points that are often widely dispersed. For example, in 2000, the average frame-relay customer purchased 12.0 ports,[149] and the average ATM customer purchased 5.4 ports.[150] Each switching port typically represents a distinct point that the customer wishes to connect, so that there is often a one-to-one correspondence between switching ports and connection points.[151] These customers look for service providers that are capable of serving large geographic areas.

105. Indeed, many customers seek service providers that are capable of providing packet-switching service not only on an intraLATA basis, but also on an interLATA basis, and in many cases on an international basis. According to IDC, 88 percent of packet-switched revenues are derived from the interLATA provision of such services.[152] Carriers with national and international capabilities accounted for 84.2 percent of ATM revenues in 2000,[153] and 82.3 percent of frame-relay revenues in 2000.[154]

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148. *SBC/Ameritech Order*, *supra* note 1, at 14,746-47 ¶ 69; *see also BOC Classification Order*, *supra* note 11, at 15,792-93 ¶ 64.

149. IDC FRAME RELAY STUDY, *supra* note 126, at Table 1.

150. IDC ATM STUDY, *supra* note 127, at 7.

151. In some cases, however, a customer may use a single switching port to connect to an Internet service provider (or some other entity) that already has an existing switching port on the same ATM or frame-relay network. In those cases, a single switching port may represent up to two distinct connection points.

152. IDC, U.S. PACKET/CELL-BASED SERVICES MARKET FORECAST AND ANALYSIS, 2000-2005, at Tables 6, 10, 20, and 24 (2001) [hereinafter IDC PACKET STUDY]. We assume that all non-local national revenue is interLATA revenue.

153. IDC ATM STUDY, *supra* note 127, at 16.

154. IDC Frame Relay, *supra* note 126, at 15.

106. From a supply perspective, the competitive alternatives do not vary significantly across SBC's region. The three largest providers of packet-switching services to business customers in SBC's region are AT&T, WorldCom, and Sprint. Nationwide, these three carriers account for 68.4 of all frame relay revenues[155] and 65.8 percent of all ATM revenues.[156] Each of these carriers provides packet switching ubiquitously throughout SBC's region. For example, AT&T claims that "[a]s the frame relay market leader, AT&T has the largest frame relay network," which includes "620 domestic Points of Presence (POP) so local access circuit mileage is minimized."[157]

107. Many other competitive carriers provide packet-switching services to business customers throughout SBC's region. For example, in SBC's region there are at least 50 CLECs (not including AT&T, WorldCom, or Sprint) that currently provide one or more packet-switching services to business customers.[158] McLeod provides packet-switching services to business customers in at least 34 major cities in SBC's region.[159] Allegiance provides service in at least 27 SBC cities;[160] Global Crossing[161] and XO[162] each serves at least 18; Pac West serves at least 15;[163] and Time Warner Telecom serves at least 10.[164]

108. For the foregoing reasons, we believe that it is reasonable to consider the relevant geographic market as SBC's entire region.

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155. *Id*. at Figure 5.
156. IDC ATM STUDY, *supra* note 127, at Figure 6.
157. AT&T Corp., High Speed Packet Services, AT&T Frame Relay and ATM Services, (downloaded from AT&T's web site at http://www.ipservices.att.com/brochures/atm.pdf).
158. NEW PARADIGM RESOURCES GROUP, CLEC REPORT 2000 (2001), at Ch. 13 [hereinafter NEW PARADIGM STUDY].
159. *Id*. at 28.
160. *Id*. at 17.
161. *Id*. at 12.
162. *Id*. at 16.
163. *Id*. at 9.
164. *Id*. at 18.

B. Application of the FCC's Four-Part Test to the Larger-Business Advanced Services Market

109. As we demonstrate below, SBC's national and in-region shares of the larger-business advanced services market are extremely small—so small, in fact, that the other three factors in the FCC's dominance test might be entirely superfluous. For the sake of completeness, however, we apply each of the four components of the FCC's test to ATM and frame-relay offerings.

1. Market Share

110. For 2000, AT&T was the national market leader in frame relay, with 35.0 percent of total frame-relay revenue and 30.9 percent of total ports.[165] WorldCom ranked second with 23.3 percent of revenue and 16.6 percent of ports. Sprint ranked third with 10.1 percent of revenue and 7.7 percent of ports; SBC ranked fifth in frame-relay revenue and seventh in total ports, with 4.4 percent of total frame-relay revenue and 7.1 percent of total ports.[166] Because SBC is constrained through regulation and section 271 of the Telecommunications Act[167] within its region to operate within the LATA boundaries there, SBC's nationwide share understates its in-region share. To estimate SBC's in-region share, we aggregate the national share for each of the four RBOCs and assume that each RBOC has the same in-region market share. Summing the national shares across Verizon (4.2 percent), SBC (4.4 percent), BellSouth (3.6 percent), and U S WEST[168] (3.0 percent) yields an in-region RBOC estimate of 15.2 percent.[169] Thus, we believe that one reasonable estimate of SBC's in-region market share for frame relay is 15.2 percent.

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165. IDC FRAME RELAY STUDY, *supra* note 126, at 12-13.
166. *Id*.
167. 47 U.S.C. § 271.
168. IDC FRAME RELAY STUDY, *supra* note 126, at 12-13. IDC presents separate estimates for Qwest and U S WEST shares.
169. *Id*. at 35.

When we account for SBC's share of all business access lines, our estimate of SBC's share of in-region frame-relay revenues falls to 11.1 percent.[170] Even recognizing that this is just an estimate, SBC's market share is clearly well below the level necessary for market power.

111. AT&T, Sprint, and WorldCom also dominate the provision of ATM services. According to IDC, AT&T had a 23.2 percent share of ATM revenue for 2000;[171] Sprint ranked second with 21.7 percent;[172] WorldCom ranked third with 20.9 percent.[173] Of the local providers, SBC ranked highest in total revenue-based market share with 6.5 percent,[174] followed by Verizon with 4.4 percent.[175] To estimate SBC's in-region share of ATM revenues, we again aggregate the national share for each of the RBOCs. Summing the national shares across Verizon (4.4 percent), SBC (6.5 percent), BellSouth (1.4 percent), and U S WEST[176] (1.7 percent) yields an in-region RBOC estimate of 14.0 percent. Thus, we believe that one reasonable estimate of SBC's in-region market share for ATM is 14.0 percent. When we account for SBC's share of all business lines, our estimate of SBC's share of in-region ATM revenues rises to 16.5 percent.[177] Again, this suggests that SBC's market share is well below the level necessary for market power.

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170. SBC has 39.6 percent of nationwide business lines, which suggests that its prorata share of the nationwide frame-relay revenues would be 6.0 percent (= 0.396 x 0.152) if each of the four RBOCs had the *same* in-region share. In fact, SBC has 4.4 percent of nationwide frame-relay revenues. Hence SBC's share of in-region revenues is likely to be less than 15.2 percent. This estimate of SBC's share of in-region frame-relay revenues is 11.1 percent (= 0.152 x 0.044 / 0.060).

171. IDC ATM STUDY, *supra* note 127, at Figure 6.

172. *Id*.

173. *Id*.

174. *Id*.

175. *Id*.

176. *Id*. IDC presents separate estimates for Qwest and U S WEST shares.

177. When one accounts for SBC's share of all business lines, our estimate of 14 percent proves to be slightly downwardly biased. SBC has 39.6 percent of nationwide business lines, which suggests that its prorata share of the nationwide ATM revenues would be 5.5 percent (= 0.396 x 0.14) if each of the four RBOCs had the *same* in-region share. In fact, SBC has 6.5 percent of nationwide ATM revenues. Hence SBC's share of in-region revenues is likely to be more than 14 percent. This estimate of SBC's share of in-region ATM revenues is 16.5 percent (= 0.14 x 0.065 / 0.055).

112. Not only are the RBOC market shares of packet switching low, but they do not appear to be gaining ground on the big three IXCs. For example, between 1999 and 2000, the RBOCs' share of the nationwide frame-relay revenues decreased from 16.2 percent to 15.2 percent;[178] their share of the nationwide ATM revenues increased from 9.9 percent to 14.0 percent.[179] Because the frame relay-market is roughly five times the size of the ATM market ($1.08 billion in ATM revenues across all carriers versus $6.32 billion in frame relay revenues across all carriers),[180] on a value-weighted basis, the RBOCs' share of the packet-switching market decreased from 15.4 percent in 1999 to 15.0 percent. Thus, we believe that one reasonable estimate of SBC's in-region market share for the packet-switching market is 15.0 percent. When we account for SBC's share of all business lines, our estimate of SBC's in-region share decreases to 12.0 percent.[181]

113. The estimated market shares presented above represent a reasonable proxy for SBC's in-region share of ATM and frame relay revenues. Extremely small market shares such as these are inconsistent with the notion of market power.

2. Demand Elasticities

114. For at least two reasons, we expect the demand for packet-switching services such as ATM and frame relay to be very price elastic. First, the major retail customers of packet-switched services are medium- to large-sized corporations, followed by government users, and educational institutions. According to IDC, corporate, educational, and government customers

178. IDC FRAME RELAY STUDY, *supra* note 126, at 12-13.

179. IDC ATM STUDY, *supra* note 127, at Figure 6.

180. IDC FRAME RELAY STUDY, *supra* note 126, at Table 3; IDC ATM STUDY, *supra* note 127, at Table 3.

181. SBC has 39.6 percent of nationwide business lines, which suggests that its prorata share of nationwide packet-switching revenues would be 5.9 percent (= 0.396 x 0.15) if each of the four RBOCs had the *same* in-region share. In fact, SBC has 4.7 percent of nationwide packet-switching revenues. Hence SBC's

constitute about 96 percent of frame relay revenues,[182] and 82 percent of ATM revenues.[183] Another analyst has stated that "[f]rame relay has yet to make significant inroads in the small business market, and attempts to move the service down market could prove cost prohibitive for some small businesses."[184] As we mentioned earlier, the FCC has recognized that larger-business customers are more sophisticated and hence more likely to be price-sensitive.

115. Second, and related to the first reason, providers of packet-switching services are often chosen through a competitive-bidding process that results in long-term contracts. These long-term contracts insulate the customers from price increases. At the same time, providers are encouraged to commit resources to the provision of these services through the inclusion of early-termination clauses, which force the customer to pay a percentage of the present discounted value of payments upon early termination. As a result, it is very difficult for any given carrier to increase prices on existing customers, or, for that matter, to lure away customers from a rival before the end of a contract.

116. Because the consumers of packet-switching services are large and sophisticated, and because existing customers can guard against price increases through long-term contracts, the price elasticity of demand facing an individual supplier, such as SBC, is likely to be very high. Hence, SBC could not profitably raise the price for its advanced services offerings.

3. Supply Elasticities

117. There are several reasons to believe that the big three IXCs and other suppliers of packet-switched services could easily absorb any customers that would choose to leave SBC in

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share of in-region revenues is likely to be less than 15 percent. This estimate of SBC's share of in-region packet-switching revenues is 12.0 percent (= 0.15 x 0.047 / 0.059).

182. IDC FRAME RELAY STUDY, *supra* note 126, at Table 4.

183. IDC ATM STUDY, *supra* note 127, at Table 4.

response to any attempt to increase its prices. This is especially true given SBC's small share of the packet-switching market.

118. First, there are numerous providers of packet-switching services throughout SBC's region with vast packet-switching networks. As noted earlier, AT&T has a domestic network with over 620 Points of Presence (POP).[185] WorldCom and Sprint have similarly extensive networks.[186] At least 25 other CLECs also provide service in ten or more cities in SBC's region.[187] CLECs have deployed at least 325 packet switches in SBC's region, and they also have deployed extensive fiber networks to connect these packet switches.[188]

119. Second, competitors have rapidly been deploying new switches, proving that providers in this market can rapidly expand their capacity. For example, from 1997 to 2000 the number of competitive packet switches has grown by more than 115 percent, from 151 to more than 325.[189] Based on this evidence, it would be difficult to conclude that competitors face high barriers to entry in the provision of packet-switching services.

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184. Stratecast Partners, *ATM and Frame Relay Market Assessment*, Data/Internet Services Growth Strategies, Volume II, Number 10 (Sept. 2001).

185. AT&T Corp., High Speed Packet Services, AT&T Frame Relay and ATM Services, http://www.ipservices.att.com/brochures/atm.pdf.

186. Sprint Corp., Sprint Business, Dedicated Access, Service and Support http://www.sprintbiz.com/esolutions/dedicated_access/service.html. (320 POPs); IDC PACKET STUDY, *supra* note 152, at 59 (showing over 700 POPs for WorldCom); MCI WorldCom, Inc., US Products, Data Networking, Frame Relay http://www.worldcom.com/us/products/datanetworking/framerelay/index.phtml (showing 402 Frame Relay POPs).

187. NEW PARADIGM STUDY, *supra* note 158, at Ch. 13 (@link, Allegiance, Alltel, Birch Telecom, Choice One, Electric Lightwave, Focal Communications, Intermedia, IP Communications, Lightyear, McLeodUSA, Metromedia Fiber Networks, Mpower, New Edge Networks, NuVox, Pac West, Rhythms, TDS Metrocom, Teligent, Time Warner Telecom, TXU Communications, Telepacific, Winstar, XO)

188. *Id*.

189. *Id*. (2000 figures); NEW PARADIGM RESOURCES GROUP, CLEC REPORT 1999 (2000), at Ch. 10 (1999 figures).

120. Third, there is abundant supply—the *Wall Street Journal* reports a "glut"—of backbone capacity for high-speed networks.[190] Indeed, the cost of adding additional switches is small relative to the total outlays.[191] The only capacity limitation is the availability of copper or fiber facilities to access the local telecommunications network, which SBC is required to provide on a nondiscriminatory basis.

121. Because existing competitors profitably could absorb SBC's packet-switched traffic (its in-region share is roughly 15 percent), and because entrants can profitably build new capacity, we believe the supply elasticity for packet-switched services is likely to be high. Hence, supply elasticity is yet another factor that would undermine SBC's ability to exercise market power.

4. Cost Structure, Size, and Resources

122. SBC has no advantages over its competitors in the provision of larger-business advanced services. First, SBC's primary competitors in the market for packet-switched services are the big three IXCs. It is unreasonable to assume that SBC has greater resources than do AT&T, Sprint, and WorldCom. Other significant suppliers of packet-switching services include Intermedia (5 percent share of nationwide ATM revenues), Global One (4.1 percent), Broadwing (2.5 percent), Infonet (2.0 percent), and Concert (1.3 percent).[192]

123. Second, SBC has entered the larger-business advanced services market with a significant competitive disadvantage—the inability to provide packet-switching services on an interLATA basis in most of the states in which it operates. As one analyst has noted, "[t]hus far,

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190. *Drowning in glass: The fibre-optic glut: Can you have too much of a good thing? The history of technology says not, but that was before the fibre-optic bubble*, THE ECONOMIST, Mar. 24, 2001 at *1; Gregory Zuckerman & Deborah Soloman, *Telecom Debt Debacle Could Lead to Losses of Historic Proportions*, WALL ST. J., May 11, 2001, at A1.

191. BATES & GREGORY, *supra* note 146, at 632.

the RBOCs have held a very small share of the frame relay market, primarily because they have only been allowed to offer intra-LATA services."[193] Indeed, competitors in the packet-switching services market routinely advertise their ability to provide both interLATA and intraLATA packet-switching services as giving them a great advantage over incumbent LECs like SBC. According to another analyst, "[b]ecause users can be exposed to a wide array of data access technologies, the ability to offer seamless, end-to-end service is becoming critical to winning new customers."[194]

124. Finally, none of these advanced services, to the extent SBC provides them, use legacy circuit-switching equipment. Rather, SBC has deployed new packet-switching equipment—including packet switches, and fiber optic cable to connect them—to provide these new services. SBC has therefore entered the packet-switched services market with no advantages stemming from its provision of local exchange, exchange access, or other circuit-switched services.

C. SBC Could Not Leverage Market Power from Telephone Exchange or Exchange Access Services into the Larger-Business Advanced Services Market

125. As demonstrated above, despite the fact that SBC is vertically-integrated into the local exchange market, it has not acquired a significant share of the larger-business advanced services market. Hence, even if SBC had market power in the provision of local exchange services, it has no ability to leverage that power to acquire dominance in the provision of advanced services to larger businesses.

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192. IDC ATM STUDY, *supra* note 129, at Figure 6.

193. *Id*. at 12.

194. *New Demands for Capacity Increase Competition Among Packet Data Providers,* PR NEWSWIRE, Oct. 4, 1999 (quoting Isabelle Gallo, analyst at Frost & Sullivan).

126. The likelihood that SBC would engage in such behavior is remote. First, SBC's competitors often do not rely on SBC's local facilities at all to provide packet-switching services, but instead use their own local access facilities. In particular, AT&T and WorldCom use their own high-speed connections in the last mile to provide advanced services to larger businesses.[195] Moreover, even where competitors do seek access to SBC's facilities, they may acquire them on a nondiscriminatory basis.[196]

127. Likewise, SBC could not engage in a strategy of predatory pricing through cross-subsidization of its advanced services. As noted above, SBC's local exchange operations are subject to rigorous price regulation—hence, there are no supracompetitive rents from which SBC could finance a cross-subsidy.

CONCLUSION

128. There is no economic justification for regulating SBC's mass-market broadband services or its larger-business advanced services. Mandatory tariffing is unnecessary to protect DSL customers from unreasonable prices or lack of choice content, because competition from cable operators and other broadband access providers compel SBC to maximize consumer choice and to price its service at competitive levels. SBC lacks market power in the mass-market broadband services market and is therefore non-dominant. Similarly, mandatory tariffing is unnecessary to protect ATM or frame-relay customers from unreasonable prices, because SBC has such a small share of the market and because SBC is constrained to compete effectively by

195. NEW PARADIGM STUDY, *supra* note 158, at Ch. 13 (AT&T at 3-4, WorldCom at 4-7).

196. *See*, *e.g.*, Applications of Pacific Telesis Group and SBC Communications, Inc., for Consent to Transfer Control of Pacific Telesis Group, Rpt. No. LB-96-32, 12 F.C.C. Rcd. 2624, 2648 ¶ 53 (1997) ("Price discrimination . . . is relatively easy for [the Commission] and others to detect," and is "therefore unlikely to occur.").

regulation that restricts interLATA data transmission. SBC also lacks market power in the larger-business advanced services market and is therefore non-dominant. The Commission would advance the public interest by forbearing from further regulation of SBC's advanced services and facilities.

APPENDIX: OUTPUT FOR NESTED-LOGIT MODEL

129. We estimate a consumer's probability of choosing a type of Internet access using a two-stage nested logit model. The four end choices are no Internet, dial-up Internet service, cable modem, or direct-service line. In the first stage of the nested logit, the consumer chooses whether to have no Internet access, narrowband access, or broadband access. No Internet access is the base category relative to which the other two branches are estimated. The independent variables that determine the first-stage choice are education dummies, income dummies, and age. If the consumer chooses broadband access, the consumer then chooses in the second stage between DSL and cable modem. The independent variable that determines the second choice is price.

130. We use TNS Telecoms survey data from the fourth quarter of 2000 and the first quarter of 2001. We restrict our sample to consumers who have access to both DSL and cable modem service—7,561 of 62,846 observations had access to both DSL and cable modem service at the time of the survey. We also exclude from the sample observations with survey weights equal to zero.

131. We calculate price information for Internet service using the bill-harvesting portion of the sample, a survey in which only a fraction of the sample participates. Even for consumers who are in the bill-harvesting sample, the price of Internet service is available only for the chosen alternative for each consumer. We impute missing data for dial-up prices using geographic matching within the sample. We impute missing data for DSL and cable modem service using the typical price charged by the RBOC (for DSL) and incumbent cable provider (for cable modem service) in the geographic area where the consumer is located. These prices were obtained from the companies' web sites and news reports about price changes. The average

price for dial-up was $19.25, for cable modem $41.80, and for DSL $43.08 in the sample for the fourth quarter of 2000 and first quarter of 2001.

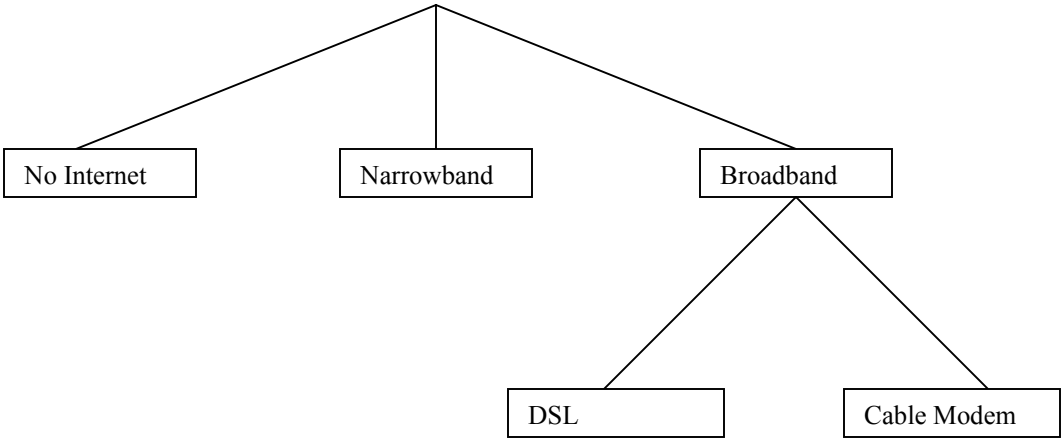
132. Table A1 presents the means of the independent variables used in the first stage of the nested logit model. In certain cases, the higher categories of the income and education variables were dropped, because they were not identified.

TABLE A1: EXPLANATORY VARIABLES IN THE NESTED LOGIT MODEL

Variable	**Mean**	**Standard Error**
Income less than $15,000	0.0746	0.26
Income between $15,000 and $25,000	0.0946	0.29
Income between $25,000 and $35,000	0.1230	0.33
Education less than high school	0.0497	0.22
High school education	0.2404	0.43
Some college education	0.2626	0.44
Age	40.0000	11.58

We used the nested logit routine in the LIMDEP (Version 7) program to estimate the nested logit model and calculate the own-price and cross-price elasticities of demand for Internet access choices. LIMDEP requires the user to specify the tree structure for the model as well as the utility functions for each alternative at each stage. The nested logit routine can then formulate the likelihood function and estimate the nested logit model using maximum likelihood. Figure A1 shows the tree structure, and is followed by the utility functions that we specified. Table A2 presents the coefficient estimates.

FIGURE A1: TREE STRUCTURE FOR THE NESTED LOGIT MODEL



The utility functions for the Nested Logit Model were as follows:

[1] U (DSL)=dsl+*beta**price

[2] U (Cable)=cable+*beta**price

[3] U (Dial-up)=dialup+*beta**price

[4] U (No Internet)=*beta**price

[5] U (Broadband)= *ibroad1**income1+*ibroad2**income2+*ibroad3**income3+ *ebroad1**educ1+*ebroad2**educ2+*ebroad3**educ3+*abroad**age

[6] U (Narrowband)=*inarrow1**income1+*inarrow2**income2+*inarrow3**income3+ *enarrow1**educ1+*enarrow2**educ2+*enarrow3**educ3+*anarrow**age

Table A2 presents the coefficient estimates from the nested logit model.

TABLE A2: ESTIMATED COEFFICIENTS FROM THE NESTED LOGIT MODEL

P (Y = BROADBAND)

Variable	Coefficient	Standard Error	T-Statistic	P-Value
Income less than $15,000	-1.4977	0.1680	-8.9170	0.0000
Income between $15,000 and $25,000	-1.1317	0.1443	-7.8440	0.0000
Income between $25,000 and $35,000	-0.9080	0.1265	-7.1790	0.0000
Education less than high school	-1.3247	0.2067	-6.4100	0.0000
High school education	-1.0906	0.1074	-10.1500	0.0000
Some college education	-0.3665	0.0995	-3.6830	0.0002
Age	-0.0245	0.0036	-6.7910	0.0000

P (Y = NARROWBAND)

Variable	Coefficient	Standard Error	T-Statistic	P-Value
Income less than $15,000	-1.3159	0.1021	-12.8870	0.0000
Income between $15,000 and $25,000	-0.7672	0.0914	-8.3930	0.0000
Income between $25,000 and $35,000	-0.6039	0.0859	-7.0260	0.0000
Education less than high school	-0.7729	0.1255	-6.1600	0.0000
High school education	-0.5869	0.0751	-7.8170	0.0000
Some college education	-0.1504	0.0784	-1.9170	0.0552
Age	-0.0197	0.0025	-7.7950	0.0000

P (TYPE OF INTERNET ACCESS)

Variable	Coefficient	Standard Error	T-Statistic	P-Value
Price	-0.0284	0.0069	-4.1140	0.0000
DSL	0.0972	0.2996	0.3240	0.7456
Cable modem	0.4374	0.2899	1.5090	0.1314
Dialup	1.7474	0.1358	12.8700	0.0000

The estimates indicate that income below $35,000 and lack of a college degree significantly decreases a consumer's propensity to choose a broadband access technology. Households that are headed by an older person are less likely to choose a broadband access technology. Finally, increases in the price of the Internet access technology—regardless of the type—significantly decreases the consumer's propensity to choose that access technology.